AUGUST 2, 1954

A Practical Rate Plan . . . p. 16

RAILWAY AGE

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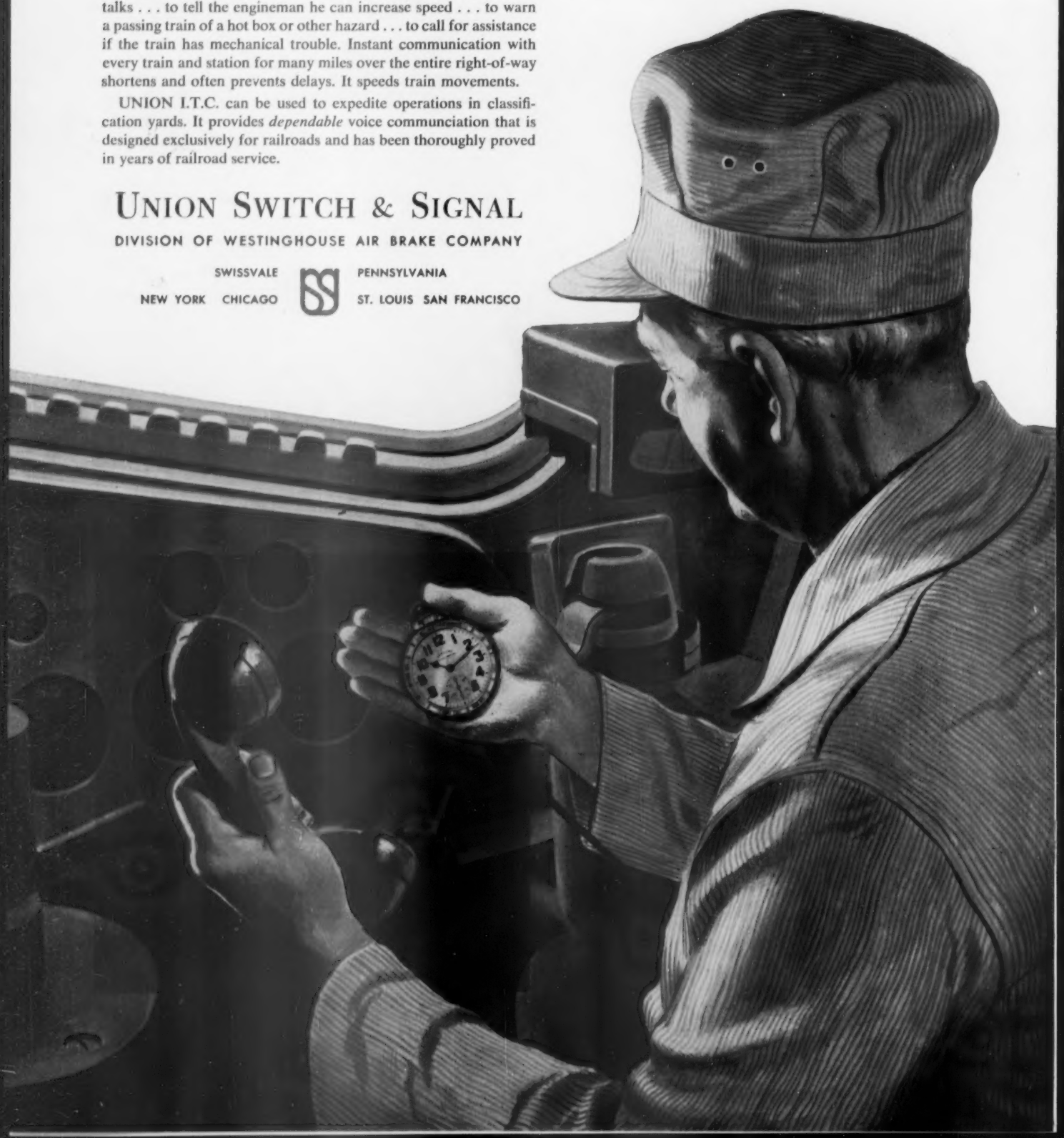

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Week at a Glance

Another ICC hearing on piggyback began at Washington last week. This one concerns the operations recently inaugurated by six eastern railroads. 6

A "home-made" dome car, with some new design features, is being tried out by the SP. 11

Fast comebacks from natural disasters seem to be becoming a Southern Pacific specialty. Not long ago it was the Tehachapi earthquakes; and just recently it has been the Texas floods, where the SP fully restored service in less than 10 days, despite record devastation. 12

How can you get the best out of diesels? Top operating officers of two railroads having widely different traffic characteristics and operating requirements give their answers. 13

FORUM: There's both good and bad in the railroad outlook for the next couple of years. Whether the good or the bad wins out depends in large part on the railroads themselves and on those who have a natural interest in their welfare. 15

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Safety and economy in passenger-car truck design are, quite properly, matters of very special concern. 24

How the C&NW "raises the roof" to provide added

Current Statistics

Operating revenues, five months	
1954	$ 3,805,777,942
1953	4,402,891,403
Operating expenses, five months	
1954	$ 3,072,350,378
1953	3,333,975,239
Taxes, five months	
1954	$ 365,310,470
1953	528,226,305
Net railway operating income, five months	
1954	$ 265,542,524
1953	448,751,912
Net income, estimated, five months	
1954	$ 166,000,000
1953	338,000,000
Average price railroad stocks	
July 27, 1954	71.09
July 28, 1953	63.31
Carloadings, revenue freight	
Twenty-nine weeks, 1954	18,243,747
Twenty-nine weeks, 1953	21,109,873
Average daily freight car surplus	
Week ended July 24, 1954	89,982
Week ended July 25, 1953	28,554
Average daily freight car shortage	
Week ended July 24, 1954	380
Week ended July 25, 1953	2,385
Freight cars delivered	
June 1954	2,650
June 1953	6,463
Freight cars on order	
July 1, 1954	13,860
July 1, 1953	52,315
Freight cars held for repairs	
July 1, 1954	120,104
July 1, 1953	95,768
Average number of railroad employees	
Mid-June 1954	1,073,847
Mid-June 1953	1,229,169

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trainshed clearance needed for dome cars and gallery-type suburban coaches. 26

A showdown on just how far trucks can go, with impunity, in violating state laws, seems to be shaping up before the ICC. 28

BRIEFS

A public relations officer has courteously remonstrated with us for a brief July 12 report in this space to the effect that the Michigan Railroads Association had concluded that railroads are not doing enough to encourage their people to keep informed on the economics of the railway situation. We're sure our Michigan friends didn't mean to suggest that railroad "PR" people aren't making the information available—but rather, were making the point that insufficient incentives are being used to induce railroad people to master and use the information which is available.

A complete refrigerator-car refrigeration system, which has been under development for a number of years, will be announced shortly by the Waukesha Motor Company.

Merger of Greyhound Corporation with the subsidiary Pacific Greyhound Lines will be considered at a special meeting of shareholders of the parent corporation scheduled for August 17 at Wilmington, Del. The move has already been approved by PGL stockholders—among whom is the Southern Pacific, currently holding a 2.5% minority interest in the West Coast bus system.

Far-reaching plans to extend and modernize Canada's grade-crossing safety program have been recommended by the Board of Transport Commissioners. Specific proposals include an increase from $1 million to $5 million per year in the federal grade-crossing fund; assumption by the federal government of a larger share of elimination or protection costs; and more advance planning on a Dominion-wide basis.

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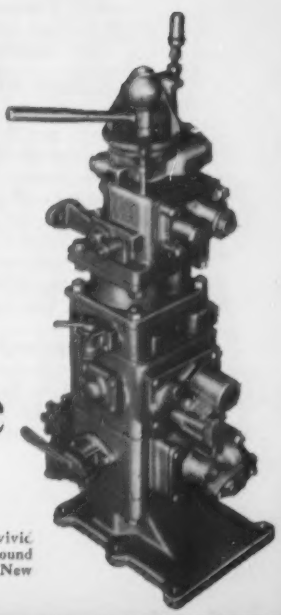

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PIGGYBACK SERVICE on the Erie, and on five other Eastern railroads, though already in operation, is the subject of ICC hearings which began last week at Washington. First west-east shipment to be carried by the Erie—40,000 lb of chemicals for use in industrial and metal cleaning compounds—left Chicago at 5 p.m., July 14; reached the Erie's Jersey City yards at 5 a.m., July 16, and was delivered before noon on that day to the Manhattan warehouse of Rutley Industries, Inc. The Rutley company says that it expects to use the new service for shipment of at least a million pounds of chemicals during the next few months.

Piggyback Tariff Hearings Open

ICC Examiner Boat hears testimony in Washington on new motor-carrier-competitive services operated by six roads

Trailer-on-flat-car operations by six eastern railroads represent "an effort to provide an improved service to the public and thereby to become more competitive with motor carriers for the huge volume of the more remunerative traffic they have been successful in diverting from railroads." So said R. W. Talbot, assistant to general traffic manager, Pennsylvania, in Washington, D. C., last week.

Mr. Talbot was testifying before Interstate Commerce Commission Examiner M. L. Boat at an investigation into piggyback tariffs filed by six railroads and suspended, on June 14, by the commission's Division 2 (*Railway Age*, June 21, page 7). The suspension was vacated July 9 (*Railway Age*, June 19, page 10), thus paving the way for new T-O-F-C operations by the railroads involved: The Pennsylvania, the Erie, the Baltimore & Ohio, the Nickel Plate, the Lackawanna and the Wabash.

Piggyback services detailed in the tariffs under investigation were reported in *Railway Age*, May 24, page 6, June 14, page 9, and July 19, page 11. The investigation is docketed as I. & S. No. 6214. Among those protesting the tariffs and who sought the subsequently vacated suspension are various motor carrier rate bureaus, the Regular Common Carrier Conference of American Trucking Associations, and four Brooklyn, N.Y., terminal companies.

Mr. Talbot, who has direct supervision for the PRR over matters pertaining to rates and divisions, presented, in the main, the historical background leading to publication of the piggyback tariffs under investigation. The first type of T-O-F-C service similar to that now operated by the six railroads, he said, was that inaugurated in 1926 by the Chicago North Shore & Milwaukee to improve handling of less-carload traffic.

The PRR's piggyback service would be "a very profitable operation" if it led to recapture from motor carriers of only a "minute fraction" of traffic now moved by trucks, Mr. Talbot emphasized, in answer to a question.

W. P. Kennedy, president of the Brotherhood of Railroad Trainmen, testified on July 28 that he favored the kind of railroad service which hauls trailers of common-carrier truck lines exclusively. This method, he said, is "the most feasible and realistic way of bringing volume hauling to the rails."

"We are encouraged," the union leader continued, "by many recent indications by railroad management that it intends to do something about its problems other than cry. These include improved service and certain rate cuts, such as that on steel hauling, and also the industry's growing interest in trailer-on-flat-car operations . . . We visualize solid trains of trailers-on-flat-cars, running at near-passenger schedules. This will give railroads sorely needed new revenues and provide truckers with economies and other advantages they do not now enjoy . . . For these reasons, the BRT is supporting piggyback operations and believes service to the common carrier to be the best way to put it into effect."

E. C. Hallberg, assistant vice-president, traffic department, Erie, also testifying on July 28, described his company's piggyback tariff as an attempt "to furnish the shipping public with a complete service from consignor's place of business to consignee's door or platform." He pointed out that origin and destination areas within which the service is performed are the same as, or smaller than, the areas within which the Erie is now performing, and for many years has performed, pick-up and delivery of freight with motor vehicles.

"Movement of trailers within the origin and destination areas under this service," he continued, "is in addition to the transportation over rails to the same extent as the long existing pick-up and delivery service. For many years the Erie has used motor vehicles to augment handling freight, and the service covered by the tariff under investigation is an extension of such use."

J. L. Webb, PRR manager of stations and motor service, described the manner in which that road conducts its piggyback operations. "The present business practice of keeping inventories to a minimum," he said, "has placed a special emphasis on service. The principal factor in service deficiencies is our terminal service . . . The ramifications of terminal service are such that, from the patron's point of view, delays frequently wipe out benefits of fast through movements."

The new piggyback service, Mr. Webb continued, permits outbound traffic to leave on PRR through trains the day it is picked up at the shipper's place of business and to be delivered to consignee the day it arrives at destination. "An advertised second-morning service by trailers on flat cars means second-morning delivery to the con-

signee, instead of merely arrival of the car in a break-up yard. . . . This method of operation should definitely have important service and economy advantages in insuring maintenance of schedules and reducing railroad handling expense at terminals."

"There is also the factor of preventing damage to LCL traffic," Mr. Webb added, "for which there is unfortunately an opportunity each time a package is handled. Rail-trailer service permits a 50% reduction in this opportunity, all handling being performed right at the shipper's door and the consignee's door. Actually, we believe there may be almost a 100% elimination of damage because there is practically no mixing of commodities, which is responsible for much damage."

Mr. Webb concluded by saying that, in piggyback service now operated by the PRR, a flat car "arriving today can and does start its return trip the same day, and the only thing that prevents 15 trips in an average month is weekend interference. I would say it is possible, on a two-day schedule, for a flat car actually to make 12 loaded trips in a 30-day month with no holidays." This, he pointed out, compares with the two-per-month average number of loaded trips of a box car in normal service.

Also testifying on July 28 were A. E. Kriesien, assistant vice-president and general manager, operating department, Erie, and E. A. Schoefield, freight traffic manager (rates-system), Baltimore & Ohio.

Mr. Kriesien described the facilities and equipment used and procedures followed in the Erie's piggyback service, while Mr. Schoefield's testimony pertained to rules and regulations in the B&O's piggyback tariff.

Fred Carpi, PRR traffic vice-president, who testified on July 29, said the contention by the truckers that railroads are seeking a monopoly of freight transportation through establishment of piggyback service is absurd. "On the contrary," he continued, "railroads are seeking to maintain competition and thereby prevent monopolies by the motor carrier industry in respect to a huge volume of important freight traffic —the more desirable high-rated business. By no stretch of the imagination can it be said that railroads can achieve monopoly by establishing rates and service competitive with motor carriers. What will be established is a healthy competitive effort by rails and trucks in the best American tradition —and in that tradition the public inevitably will profit in better and more economical service."

Mr. Carpi referred to the continuing trend toward placing new plants in outlying sections of established industrial areas where rail siding connections cannot be installed, to dispersal and decentralization of industrial plants, and to use by industry of inventory control methods calling for smaller quantities of supplies with frequent replenishment on fast shipping schedules as factors that have created competitive handicaps to carload service.

These handicaps, he emphasized, "Have become increasingly serious in recent years. It is of the utmost significance that the trailer service here under investigation offers a promising medium for overcoming each of these competitive disabilities."

New Facilities

PGE Plans Further Extensions

Will build south to Vancouver, north to Dawson Creek, at estimated total expenditure of $60 million

The long-planned extensions of the Pacific Great Eastern from Squamish, B.C., south to North Vancouver, and from Prince George, B.C., north to Dawson Creek, are now definitely scheduled to be begun this year and next, respectively. The two projects together involve construction of some 310 miles of new railroad, at an estimated total cost, including purchase of some new equipment, of $60 million.

Vancouver Extension — The proposed southerly extension, from the PGE's present southern terminal at Squamish, to North Vancouver, will be about 40 miles long, and is estimated to cost about $12 million. Most of the initial contracts for necessary grading will probably be awarded within the next month or two; and the target date for completion of the line is the late summer of 1956.

This line will replace the steamship service now operated by the railroad between Squamish Dock and Vancouver, and will give the PGE its second actual rail connection with the rest of Canada's railroad system.

Dawson Creek Extension — The other extension, from the PGE's present northern terminus at Prince George north to Dawson Creek, in extreme northern British Columbia, is expected to be about 270 miles in length, and to cost in the neighborhood of $48 million, including equipment purchases. Actual construction on this line is expected to begin in the spring of 1955.

For most of its 40-year history, the British Columbia-owned Pacific Great Eastern was an isolated railroad, beginning at Squamish, ending at Quesnel, 347 miles to the north, and having no physical connection with any other line. Then in 1952 it completed an 82-mile extension farther north from Quesnel to Prince George, where, for the first time, PGE tracks were connected with those of another railroad—the Canadian National's line to Prince Rupert.

That that extension has paid off is indicated by financial results of PGE operations—a 1950 loss of $763,000 was reduced to $216,000 in 1952 because of added business produced by the link with the CNR at Prince George; and was further reduced last year to $54,000, in spite of a prolonged woodcutters' strike.

The PGE, and its Quesnel-Prince George extension were described in *Railway Age* November 12, 1949, page 50; March 19, 1951, page 86; July 7, 1952, page 142; January 12, 1953, page 235; and January 26, 1953, page 13.

C&O Moves Detroit Staff

Over the weekends of July 17 and 24, some 300 employees of the Chesapeake & Ohio were transferred from offices in Detroit's Fort St. Union Depot to the General Motors Research building—some three miles distant.

The move was occasioned by construction of a new expressway which required vacation of the depot wing in which the offices were located. Moving arrangements were such that all employees of the accounting, engineering and freight claim departments performed their customary duties in the new quarters on the following Monday mornings.

The new quarters—all the seventh, and part of the eighth, floor of the GM building—have been completely altered and decorated. Acoustical ceiling and rubber tile flooring have been installed throughout. In work areas, doors are controlled by photo-electric cell "eyes," and automatic dispensers of beverages, cigarettes and candy have been installed at convenient locations. All lighting is fluorescent and the color scheme is based on four pastel tones.

Southern RRs Have Spent $2 Billion Since the War

Railroads of the South have invested over $2 billion in improvements since the end of World War II, and are currently spending nearly $300 million a year to spearhead the region's industrial development, according to a special report by the Southern Association of Science and Industry.

The survey of railroad improvements was begun several months ago by a committee of executives of 22 rail lines operating in the South. The committee was headed by Warren T. White, assistant vice-president, Seaboard Air

Line. Only capital expenditures for new equipment and facilities were included in the survey, which did not cover the extensive activities by railroads to develop industry and agriculture through other methods.

Southern railroads, the survey shows, since 1946 have installed 13,659 miles of new rail, and new signaling equipment on 5,651 miles of road. Equipment added has included 3,921 new locomotives, 39,164 box cars and 104,401 cars of special types, and 1,238 new passenger cars.

Train-to-Wayside Radio, Texarkana to Toyah

With installation of 12 fixed wayside radio stations, the Texas & Pacific has completed a program of providing radio communication on 669 miles of main line between Texarkana, Ark., and Toyah, Tex.

The new stations were established between Ft. Worth and Toyah, wayside radio stations having been installed between Ft. Worth and Texarkana in 1953. These stations provide train-to-wayside and station-to-station radio communication. Freight trains operating in this territory were previously equipped with radio for end-to-end communication.

Rock Island Opens Second Iowa Cutoff

The Rock Island has completed another important line change in Iowa.

This latest project, covering relocation of main line at Adair, some 75 miles east of Omaha, Neb., included construction of 6.63 miles of trackage. It saves 0.87 miles of distance, and reduces curvature and grades. The $1,252,000 undertaking is located just a few miles from the much larger Atlantic cutoff, completed last year, and described in the October 5, 1953, *Railway Age*.

NP to Remodel Unusual Station at Bismarck, N. D.

The Northern Pacific is remodeling its unusual old station building at Bismarck, N.D., at a cost of approximately $40,000. Built in 1901, the station became widely known for its then-unusual structural design of concrete hollow wall construction and marble chip exterior surface. The marble was scrap left over from construction of the Minnesota state capitol at St. Paul.

A porch-like structure on the station's east end will be enclosed to provide added freight office space. Improvements in the waiting room include a new ticket counter, a public address system and completely remodeled rest rooms. New lighting fixtures will accentuate a new interior color scheme. The exterior of the building will be painted.

The NP expects the project to be completed by next spring.

PRR to Move Philadelphia Offices to New Building

The Pennsylvania has sold its 24-story Suburban Station building in Philadelphia to Matthew H. McCloskey as part of a $35,000,000 transaction to aid in development of Penn Center, the projected $100,000,000 building and transportation center to be erected on the site of PRR's former Broad Street station (*Railway Age*, May 25, 1953, page 22).

Mr. McCloskey, a Philadelphia contractor, will buy an additional block of ground and build on it a 4- or 5-story transportation center (with ticket and reservation offices and baggage-handling facilities for air lines, bus lines and other transportation agencies), including an office tower of eight or more stories. The PRR will move its executive and system offices from the Suburban Station building to the office tower, and space which it now occupies in the Suburban Station building will be leased to other tenants. Sale of the building does not include the station underneath, which the PRR will continue to operate.

The PRR and eight Philadelphia banks also have announced that a joint $22,000,000 pool has been made available for construction loans to developers of Penn Center.

Chicago & Eastern Illinois.—The ICC has dismissed "without prejudice" this road's 1952 application for authority to extend its line for approximately 20 miles east of Evansville, Ind., to a point on the Ohio river near Yankeetown (*Railway Age*, October 6, 1952, page 128). The dismissal was requested by the road.

Chicago & North Western.—A preliminary agreement has been reached with the Chicago Transit Authority whereby the C&NW's right-of-way will be utilized in part for operation of the Lake Street elevated line in Oak Park, Ill. The rapid transit line parallels the C&NW throughout the approximately three-mile section involved, but is at ground level, while the C&NW is elevated—a situation that has resulted in a grade crossing problem for CTA. As now envisioned, the plan calls for abandonment of all present CTA line and stations at ground level except the terminal in Oak Park. Two tracks on the south side of the present C&NW elevation would be turned over to CTA for electrification, while two new C&NW

Z. G. HOPKINS, who recently retired as special representative of the public relations department of the Association of Western Railways, was guest of honor at a recent testimonial dinner tendered by some of his long-time associates in railroad "PR" work. Here, Samuel O. Dunn (left), chairman emeritus of Simmons-Boardman Publishing Corporation, publishers of *Railway Age*, chats with Daniel P. Loomis, chairman, AWR, and Mr. Hopkins. To the latter's left are W. E. Hayes, executive assistant, Rock Island, and author of the Rock Island history, "Iron Road to Empire," published by Simmons-Boardman; H. M. Sims, director of public relations, AWR; and Col. Robert S. Henry, vice-president, public relations, Association of American Railroads. Mr. Hopkins' retirement brought to a close a 40-year business career, of which he spent 21 with the Western Railways.

tracks would be built in the center of the elevation, which is not now occupied.

The project would eliminate all but one of the C&NW's Oak Park stations, although the C&NW's suburban service on the line would continue as at present. The plan was initially suggested by Ralph Budd shortly before his retirement as chairman of CTA. His successor, Virgil E. Gunlock, estimated that the cost would be about $4 million, and that it would have to be borne by public agencies and local governments.

Northern Pacific.—Two contracts have been awarded in connection with construction of the $5-million automatic retarder yard now being built at Pasco, Wash. One contract, covering retarders and electrical equipment for automatic switching and retardation, went to General Railway Signal Company at a total cost of "close to $1 million." The other contract, for grading, was awarded to J. A. Tirteling & Sons, Auburn, Wash. The yard project (*Railway Age*, February 1, page 28) is scheduled for completion early in 1955.

Ontario Northland.—The ON is installing 22 miles of absolute-permissive block signaling between Latchford, Ont., and Temagami. Equipment has been ordered from the General Railway Signal Company.

Reading.—The ICC has authorized construction and operation by the Reading of a new line, extending 3.4 miles from Laurel Dale, Pa., to Blandon, to be devoted entirely to freight service. The construction is part of a program to improve operations in and through Reading, Pa.

Seaboard Air Line.—To obtain the site of the SAL's present freight station in Orlando, Fla., for use as a downtown parking lot, the city has agreed to provide another location for the Seaboard and to construct on the new site, at no cost to the road, a freight station and other facilities. The new site, approximately 1½ miles from the present station, is about 400 x 900 ft, compared with 185 x 456 ft for the old site, and is said to have cost the city $285,550. Cost of the proposed new station and other facilities, plans for which have not been completed, is estimated at $237,750.

Southern Pacific.—Intercity telephone dialing, now in operation between San Francisco and Los Angeles and between San Francisco and Sacramento, will be expanded to include Stockton, Tracy, Martinez and Oakland, using a combination of carrier channel and physical circuits. The telephone company will provide necessary equipment for connecting railroad circuits with rented private branch exchanges. When completed, the system will enable all SP employees within this territory to dial one another directly—and at a considerable saving in time.

A pneumatic tube system (9,300 ft of six-inch tubing and 12,000 ft of four-inch tubing) is being installed at Taylor yard, Los Angeles. It will be used for movement of waybills from yard to yard office, and from yard office to freight office; and for car tags, consists and other train papers between yard, freight and hump tower offices.

Labor & Wages

Transport Workers, United Railroad Workers, to Merge

The Transport Workers Union of America and the United Railroad Workers of America, both CIO affiliates, have agreed on a plan of amalgamation.

The 40,000-member URWA, which has been in existence since the end of World War II, has about 60 locals, a considerable number of which represent non-operating employees of the Pennsylvania under union shop agreements. The TWU has approximately 75 locals. Its membership (about 110,000) is principally employed on rapid transit, street car and bus lines in New York City and in a number of other metropolitan areas, although it also has a large membership among air line employees.

The TWU was authorized by its latest convention to seek amalgamation with other CIO unions in the transportation field; and the executive board of the URWA approved plans for the amalgamation at a recent meeting. These plans will be voted upon by a referendum of URWA members within the next few weeks. If they are approved, the TWU will issue charters to the railroad locals, and they will become a division of TWU.

Ahnapee & Western Strike Over; Fireman Stays

Operations of the 34-mile Ahnapee & Western have returned to normal following settlement of a 15-day strike over the status of diesel firemen on a short line (*Railway Age*, July 20, page 12). Embargoes by the Green Bay & Western and the Kewaunee, Green Bay & Western—the only route connecting with the A&W—have been lifted.

The walkout resulted from a lengthy dispute between the Wisconsin carrier and the Brotherhood of Locomotive Engineers and the Brotherhood of Locomotive Firemen & Enginemen. The company maintained that it was "vital to our economic situation" to operate its diesel locomotive without a fireman. "The saving to our company by so doing means the difference between annual profit and loss," President V. M. Bushman stated shortly after the walkout began. "There is no more need to have a fireman in the cab of our diesel locomotive than there is to require two men in the cab of every truck on the highway," he added.

The pressure of shippers, seriously affected by the stoppage of service, made it necessary to conclude a compromise settlement, Mr. Bushman told *Railway Age*. He said the net result was that "we now have half a fireman—costwise" as the two brotherhoods, along with the Brotherhood of Railroad Trainmen, made concessions in their working schedules which saved about 50% of the cost of the fireman's wages.

"It does seem a bit ridiculous," he added, "that with only one train crew composed of five men, our company must conduct negotiations with three separate labor organizations."

Figures of the Week

Freight Car Loadings

Loadings of revenue freight in the week ended July 24 totaled 684,287 cars, the Association of American Railroads announced on July 29. This was a decrease of 10,258 cars, or 1.5 per cent, compared with the previous week; a decrease of 96,412 cars, or 12.3 per cent, compared with the corresponding week last year; and an increase of 77,097 cars, or 12.7 per cent, compared with the equivalent 1952 week, which was affected by a strike in the steel industry.

Loadings of revenue freight for the week ended July 17 totaled 694,545 cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday, July 17

District	1954	1953	1952
Eastern	111,579	132,824	101,437
Allegheny	127,503	161,376	94,555
Pocahontas	49,880	59,117	48,120
Southern	111,809	121,580	113,735
Northwestern	116,818	135,280	72,242
Central Western	119,536	123,108	120,977
Southwestern	57,420	58,129	57,934
Total Western Districts	293,774	316,517	251,153
Total All Roads	694,545	791,414	609,000
Commodities:			
Grain and grain products	69,858	63,721	66,291
Livestock	7,110	6,823	7,025
Coal	108,637	132,605	105,111
Coke	6,684	12,665	3,662
Forest products	38,108	46,789	47,218
Ore	73,121	96,407	11,344
Merchandise l.c.l.	58,616	63,244	66,771
Miscellaneous	332,411	369,160	301,578
July 17	694,545	791,414	609,000
July 10	569,562	721,454	572,362
July 3	618,597	670,273	447,516
June 26	713,160	818,450	646,480
June 19	707,208	812,578	643,969
Cumulative total, 29 weeks	18,243,747	21,109,873	20,164,803

In Canada.—Carloadings for the seven-day period ended July 14 totaled

78,155 cars, compared with 64,964 cars for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
July 14, 1954	78,155	24,276
July 14, 1953	82,334	30,054
Cumulative Totals		
July 14, 1954	1,888,480	780,955
July 14, 1953	2,091,975	887,127

Traffic

Defense Dept. Completes Revamp of Traffic Branch

Earl B. Smith, director of transportation and communications, Department of Defense, has announced completion of the reorganization of the department's Traffic Management Branch, which now consists of a Freight Traffic Section and a Passenger Traffic Section. Also announced were assignments of two additional persons to the Freight Traffic Section: John E. Downey, as a transportation specialist in the freight rate and classification area, and Raymond Lytle, as a transportation specialist in the general freight traffic service area.

Shippers Say "Rule 34 is OK"

Rule 34 is just and equitable in its present form, according to a poll recently conducted by *Railway Freight Traffic*, companion publication of *Railway Age*. The poll panel consisted of 200 industrial traffic managers and traffic directors of chambers of commerce.

The poll was prompted by the recent action of the Interstate Commerce Commission in Docket 30280, which reduced the minimum weight for box cars measuring more than 40 ft 7 in. and not more than 50 ft 6 in. to 140% of the basic weight, from a previous 162% (*Railway Age*, February 22, page 16).

Five out of 10 of the traffic managers upheld the commission's action. Several reasons were given by those favoring the present status of Rule 34, such as:

- The rule is an advantage to the shipper;
- There are not enough 50-ft cars available to warrant a change in the rule;
- The rule helps railroads retain business on an equitable basis;
- It curbs any favoritism that may be shown certain shippers of light and bulky articles; and
- It prevents indiscriminate use of 50-ft cars.

Those opposed to the general trend of thought expressed by the majority group, were definite in their opinions on why the present Rule 34 should be amended even further than was ordered by the ICC action. They expressed their views this way:

- Present rules provide for too great a minimum weight in excess of minimum requirements in the classification;
- They work against the "small town" shipper, because a good supply of cars is not available;
- They do not lend support to present sales patterns that use 40-ft cars in setting basic minimum weight for orders;
- They prevent a company from practicing a policy of low inventory ratios, which, in the past few years, have been based on truckload lots; and
- Ratios of cubic capacities of different size cars are not uniform nor equal.

In Congress

Congress Passes Bill to Aid Hog Island Development

The Senate and House have passed a bill that would permit Philadelphia to develop further the Hog Island site in that city as a land, air and marine terminal.

Senator Duff (Pa.) described the bill as one relieving the city of certain obligations, including ground rent, embodied in a deed of July 1930, whereby title to the 950-acre island was transferred from the United States to the city.

He added that the city was prepared to spend $10 million in improvements to the terminal in addition to $30 million expended there during past years. The bill includes a provision whereby the United States maintains the right to use all or part of the site in the event of war or national emergency, meanwhile compensating the city for its use.

Supply Trade

Reilly Tar & Chemical Corp. has opened a sales office at 2009 Fannin street, Houston, Tex., in charge of **Donald Becker.**

Huck Manufacturing Company, Detroit, has appointed **Turney & Beale,** Bayside, N.Y., as east coast distributors, and **California Rivet Company,** Glendale, Cal., as west coast distributors, of its products.

Theodore F. Eichstaedt, manager of the machinery and tool department at the Chicago plant of **Joseph T. Ryerson & Son, Inc.,** has been appointed assistant manager of the Machinery and Tool division.

James D. Helm, sales manager of special accounts, **General Electric Company,** has been named sales manager for mobile communication equipment and special accounts, at Schenectady, to direct national sales. **Neal F. Harmon,** sales manager of two-way radio equipment at Schenectady, has been appointed southwestern regional manager for communication equipment, at Dallas, Tex.

Donald F. Brickley, zone manager in northern Illinois for **Motorola Communications & Electronics, Inc.,** has been named regional sales manager for the Pacific Northwest, at Portland, Ore.

Robert H. Davies, vice-president of **Clark Equipment Company,** formerly in charge of industrial truck production and engineering, now has overall direction of the Industrial Truck division.

W. E. Schirmer, vice-president, previously in charge of Industrial Truck division sales, has been assigned to handle special projects, including market research.

Law & Regulation

AAR Submits Views on Contract Carrier Law

The Association of American Railroads has recommended to the Interstate Commerce Commission law changes which it holds would end the "preferential status" of motor contract carriers.

The recommendation is included in a statement filed with the commission in response to a request by the ICC for different viewpoints on contract carrier legislation.

Declaring that an initial purpose of the Interstate Commerce Act was to

JOHN H. WINCHELL, whose appointment to the Interstate Commerce Commission was confirmed by the Senate on July 2 (*Railway Age*, July 12, page 8). Mr. Winchell was sworn in as successor to James K. Knudson on July 28.

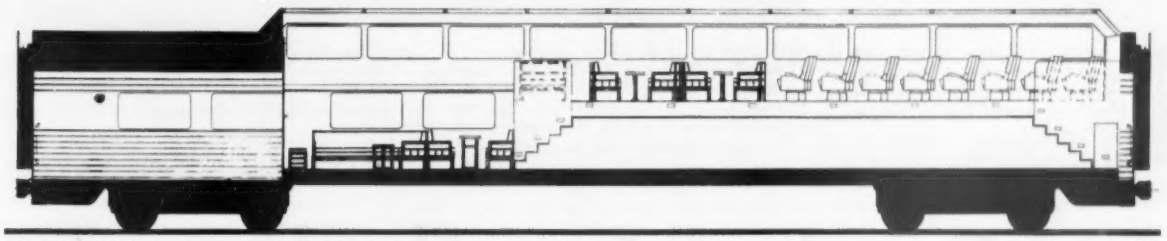
prevent special carrier contracts with shippers, the AAR charges there has been a "reversal of legislative attitude" which allows motor carrers to make such arrangements.

Such legislation, the statement goes on, gives preferential status to contract truckers over both rail and motor common carriers.

To counteract this the AAR proposed the following measures:

Uniform regulation for all for-hire carriers; contract carriage only where common carriage is not available; requirement of proof of public convenience and necessity for contract carriers; limitation of contract carriers to service to specified shippers authorized by the ICC; and, required publication by contract carriers of their rates, rules, regulations and practices.

Equipment & Supplies



TWO LEVELS UNDER THE SAME DOME—a new idea being explored in . . .

SP's Home-Built Dome Car

More of this type may follow, the SP says, if passengers approve pilot model, just completed at Sacramento

The Southern Pacific has just completed its first dome passenger car—a bi-level design worked out in a former lightweight parlor-observation car at the company's Sacramento (Cal.) shops.

The basic differences between the SP design and existing full-length or "standard" size dome cars are: (a) There are no passenger facilities beneath the upper floor level; and (b) the dome extends over a part of the interior that is at conventional floor level.

The purpose of this design, according to Claude E. Peterson, SP vice-president, system passenger traffic, is to put every passenger seat in the car under the glass top. By covering both levels of the car, the dome gives an unusually high-ceiling effect and an air of spaciousness, Mr. Peterson commented. The top of the dome, he said, is about 20 inches above the normal car roof line.

The interior beneath the dome is divided into three areas—a cocktail lounge on the conventional level, and a lounge and an observation section on the upper level. The space between the upper level floor and the normal floor level beneath is given over to storage and to air conditioning equipment. That portion of the car floor area not under the dome houses a small service bar and valet quarters.

The car will be tested on a number of SP "name" trains, both to get passenger reaction to the design and to see how it works out under actual service conditions.

The car is 81 ft long, and has a total seating capacity of 64. Its exterior colors follow the orange and red scheme of the road's "Daylight" streamliners. Basic interior colors—shades of green accented by the browns of teak and rattan—were worked out by Maurice Sands, a San Francisco designer. Interior furnishings are "characterized by simplicity" and are "in the manner of the best Pacific Coast contemporary design," Mr. Peterson explained.

Employees who worked on the car, along with members of their families are being given a special trip in the car from Sacramento to San Francisco.

FREIGHT CARS

The **Chicago & Illinois Midland** has ordered 150 50-ton box cars from ACF Industries, Inc. Delivery is scheduled for the first quarter of 1955.

The **Nevada Northern** has ordered four steel cabooses from the Rail & Industrial Equipment Co. for delivery in 1954.

Financial

N&W Seeks to Acquire Chesapeake Western

The Norfolk & Western has agreed to purchase the 54-mile Chesapeake Western, in Virginia's Shenandoah valley, for about $825,000, subject to approval of the Interstate Commerce Commission. Joint announcement to that effect was made July 29 by N&W President R. H. Smith and CW President D. W. Thomas.

A petition has been filed with the ICC asking for approval of N&W acquisition of outstanding stock and bonds of CW, all of which are owned by Mr. Thomas. Under the N&W's proposal, the CW will continue to operate as a separate corporation, and Mr. Thomas will remain in an advisory capacity.

The CW runs west from an N&W connection at Elkton, Va., to Harrisonburg, then south to Staunton, a mainline distance of 46 miles, with an 8-mile branch from Harrisonburg to Bridgewater.

The ICC application points out that Mr. Thomas is 64 and wishes to retire, and that the N&W is the logical carrier to control his line. It states that CW territory is tributary to the N&W's Shenandoah division, and that the majority of the smaller line's freight traffic is interchanged with the N&W. "In short, applicant has a real interest in development of the area served by the Chesapeake Western," the petition continues, and adds that "no employee of either railroad would be adversely affected by the proposed transaction."

The CW was built in 1896 by W. E. D. Stokes, who planned a major line from the West Virginia coal fields to tidewater on Chesapeake bay. Much of the line was surveyed and some right-of-way purchased, but the original railway comprised only the 40 miles between Elkton and Stokesville. Mr. Thomas became general manager in 1926 when the road was in poor financial condition. Under his direction 14 miles of unprofitable line from Bridgewater to Stokesville were abandoned, and a portion of the old Valley Railroad from Harrisonburg to Lexington was purchased from the Baltimore & Ohio. During World War II, Mr. Thomas removed the southern 35 miles of this track, selling the rails for defense use, so the line now terminates at Staunton.

(Continued on page 28)

50 FEET DOWN to the water line and 150 feet across the gap. This washout was a few miles east of Langtry. More, of nearly equal dimensions, were close by.

STRANDED at the tiny community of Langtry, the "Sunset Limited" and an 81-car freight train await reconstruction of the main line after heavy damage by floodwaters of the Rio Grande on the night of June 26-27. The streamliner's 200 passengers continued their journey by helicopter to relief trains. All highway approaches to the area were destroyed.

Fast Comeback from Floods

In West Texas the Southern Pacific took some record punches from the Rio Grande, Pecos and Devils rivers—Its main line was cut in pieces and under as much as 22 feet of water—Service was fully restored in less than ten days

INTERNATIONAL BRIDGE (left) at Eagle Pass—where a branch of the SP connects with the National of Mexico—was washed out for more than 300 feet. The bridge itself was partially filled with debris. Service was restored here on July 5. "SUNSET AIRLIFT"—wherein Air Force helicopters (center) moved out 200 stranded passengers, 319 sacks of first class mail and 125 pieces of hand baggage with a minimum of delay—is said to be the largest peacetime helicopter airlift in domestic history. Throughout the flood there were no fatalities or injuries to SP passengers or employees. **RESTORATION BEGAN** (right) as soon as the waters subsided. Five divisions of the railroad and two contractors furnished a total of 510 men and 88 units of heavy earth-moving equipment. Floodlights made round-the-clock schedules possible. The two stranded trains moved to El Paso on July 3. And less than ten days after the waters struck—at 4 a.m. —July 7—service was restored on all lines (July 12, page 12; July 5, page 12).

Questions and Answers FOR THE TRANSPORTATION DEPARTMENT

As railroads become fully dieselized, or approach that goal, the utilization of diesel power is receiving increasing attention. At the annual meeting of the American Association of Railroad Superintendents in June, one of its committee reported that carriers have adopted some of the following methods—successfully—in their efforts to get the best out of diesels: (1) Centralized authority for assigning and distributing motive power; (2) system pooling, permitting centralized reports; (3) use of train movement charts; (4) over-powering, rather than storing, in the event of surplus power; (5) education of employees, including supervisory forces, as to proper maintenance; (6) staggering certain schedules, particularly of local freight trains; (7) interchanging units between passenger and freight service; and (8) developing tonnage ratings which insure maximum loads, but prevent overloading.

We brought this report to the attention of the chief operating officers of several roads, as a sort of kick-off point for a discussion of individual railroad efforts to utilize power to better advantage. Below are the comments of two officers. More information on this subject will be carried in a future issue.

—*C.C.R*

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CONDUCTED BY G. C. RANDALL, district manager, Car Service Division (ret.), Association of American Railroads, this column runs in alternate weekly issues of this paper, and is devoted to authoritative answers to questions on transportation department matters. Questions on subjects concerning other departments will not be considered, unless they have a direct bearing on transportation functions. Readers are invited to submit questions, and, when so inclined, letters agreeing or disagreeing with our answers. Communications should be addressed to Question and Answer Editor, *Railway Age*, 30 Church Street, New York 7.

Here's how two roads handle diesel power.

When we had steam locomotives, power was assigned to divisions and was distributed by the superintendent and master mechanic. Today, there is a chief engine distributor in the office of general superintendent transportation who has available consists of freight and passenger trains and distributes power based on requirements. The chief engine distributor also works with the transportation departments in the scheduling of trains in order to take advantage of all opportunities to get better power utilization. Thus, diesels used on through freights during the night may be on local freights or in yard service during the day, etc.

Diesel power is in a system pool, with heavy repairs centralized at two points, one on the east end and one on the west end of the railroad. This permits inspection, repairs, etc., with a minimum of out-of-service time.

We have a minimum of power based on minimum requirements, and do not find it necessary to store any power.

Power, to the extent practicable, is purchased on the basis of interchangeability among the various classes of service, i.e., passenger, freight and yard service. This is particularly true since the road-switcher type of locomotive has been developed.

Tonnage ratings are developed for each type of power over various territories. This is published for the information of all concerned, and used by the chief dispatcher and chief engine distributor in assignment of motive power.

Close cooperation between the offices of general superintendent transportation and general mechanical superintendent is of paramount importance, schedules for inspection and maintenance being worked out with a minimum of out-of-service time.—*P. R. Goulett, vice-president, New York, New Haven & Hartford.*

When we decided fully to dieselize, we assigned one officer the duties of studying the various power assignments and distributing power through a complete centralized system of maintenance and utilization, pooling power to the greatest extent consistent for the entire system.

After tonnage tests had been conducted on various districts, we found we could reduce the number of units in consist of assemblies and satisfactorily handle tonnage and maintain schedules, resulting in release of units to be used on other schedules and districts. . . . We have been able to operate all our through-freight power in one pool, out of Pine Bluff, Ark., where all inspection, maintenance and repairs to road units are made. We also found that, on certain districts, power handling through freights and locals into certain terminals was receiving excessive detention at terminals due to scheduled departure times. In such cases we shifted general-purpose type units to those through-freight schedules in order to utilize the power during the long layover period to handle switch engine shifts and turnaround runs out of the terminal and get the power back into the terminal in sufficient time to take the through freight train out on schedule.

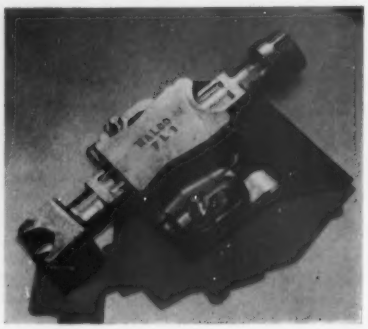
For example, we have a through-freight schedule known as the "Blue Streak Merchandise," handling merchandise from St. Louis to Dallas, due in Dallas at midnight. We operate this train from Texarkana to Dallas, 193 miles, with two general-purpose units. After arrival at Dallas, we separate the two units, using one Dallas to Addison and return to fulfill a manifest schedule connection with a north and south schedule operated Fort Worth to Texarkana. This unit arrives back in Dallas at 7:00 a.m. and is available for switch service until 7:25 p.m., when it is reassembled with the other unit to protect a through-freight schedule out of Dallas to Texarkana at 7:25 p.m. The other unit that arrives in Dallas on the "Blue Streak Merchandise" at midnight is used out of Dallas on a turnaround passenger train to Mt. Pleasant, Tex., making 264 miles in passenger service. It arrives back at Dallas at 5:40 p.m., where it is assembled with the unit referred to above and leaves Dallas at 7:25 p.m. on the through-freight schedule to Texarkana. Arriving Texarkana at 8:00 a.m., one of these units is again detached and used to power a turnaround local, Texarkana to Redwater Ordnance Plant, making the trip in time to arrive back in Texarkana to be reassembled and power the "Blue Streak Merchandise" Texarkana to Dallas.

Thus, the two-unit locomotive is protecting 193 through-freight train miles both ways, 264 passenger-service miles, a short turnaround through-freight schedule Dallas to Addison, and a turnaround local freight, and is available for switch service for about 16 hrs. at Dallas.

We do not follow the procedure of doubling up power instead of storing. We endeavor to plan our maintenance program to have more annual inspections, etc., fall during the period when traffic is at a low ebb and units can be spared from operation, which permits more units to be available for service during peak periods.—*G. B. Matthews, vice-president and general manager, St. Louis Southwestern.*

What's New in Products

NALCO molybdenum-disulfide sticks for use in the Nalco flange lubricator shown at right with angle mounting bracket for attachment of the unit to the locomotive.



Flange Lubricator

A locomotive wheel flange lubricator, recently announced by the National Aluminate Corporation, 6216 W. 66th place, Chicago 38, utilizes molybdenum disulphide as a dry lubricant to prevent excessive wear of wheel flanges. A cast iron housing and stick holder and molded Nalco Moly sticks comprise the lubricator assembly which is applied by a bracket to the truck frame. An adjustable feature supplements automatic down feed of the stick.

The Nalco Moly sticks are designed to supply dry lubrication, and thus not pick up dust, sand or other gritty materials that promote abrasion. Year long tests recently completed are said to show substantial reductions in flange wear on locomotives equipped with these lubricators •

Air-Cooled Electric Plant

A 5,000-watt a-c air-cooled lightweight electric plant, the 5RM61, is in production by the Kohler Company, Kohler, Wis. It is designed for installations where a liquid-cooled unit is not practical.

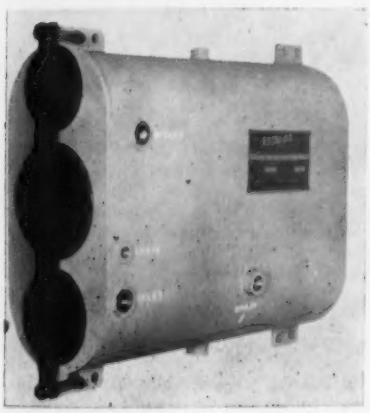
Powered by a Kohler K660 two-cylinder opposed, four-cycle engine, the new plant is available in a 115-volt or 115/230-volt single phase a-c models.

Either manual or remote starting is available in all models of this plant. Remote starting models are equipped with automatic chokes.

Cooling of the engine is accomplished by a large capacity blower and housing with baffles. This directs cooling air around the finned cylinder and head areas. Because it is air-cooled, antifreeze is not necessary.

The electric plant is equipped with a muffler, an oil bath air cleaner and oil pressure gage. Optional accessories available include radio shielding, an oil filter, vibro dampers, gas valve and carburetor for combination gas-gasoline operation, 55-gal fuel tank and fittings and two six-volt starting batteries for remote starting models.

The unit is 23⅛ in. wide, 28 11/16 in. high, 32⅝ in. long. It weighs approximately 480 lb •



Micronic Filter For Diesel Fuel Oil

The FEQ-5 combination water separator and micronic filter for diesel fuels has been developed by the Warner Lewis Company, Tulsa 8, Okla. This unit removes both solid contaminants and water.

The FEQ-5 is of cast aluminum construction. It is said to effect both water removal and filtration down to five microns, guaranteeing a fuel stream 99.995 per cent pure. This unit is 22 in. long, 18 in. high, and 8 in. thick, with a handling capacity of 250 gallons per hour. It is designed to be mounted as an accessory to the engine in the fuel supply system after the fuel pump. Universal mounting brackets permit easy installation directly on the fuel supply line •

General Utility Towing Tractor

New features, said to provide greater driving safety, comfort and simplicity, have been incorporated in the redesigned "Clarkette 5" line of general utility towing tractors of Clark Equipment Company, Battle Creek, Mich.

While basic dimensions of this 500-lb drawbar-pull capacity machine have been retained, the driver platform has been lengthened and the brake pedal relocated to provide more room for the operator without affecting turning radius and intersecting aisle dimensions. The control lever has been altered to reduce hand fatigue and the center control linkage has been moved to a lower cross bar, so the control handle is now obstruction free. The Continental N-62 engine has been equipped with revised piston rings and aluminum pistons •

55 Tons—Not 65

The Atlas Car & Manufacturing Co.'s diesel ore car pusher, pictured on page 48 of the June 14 issue, is rated at 55 tons—not 65, as erroneously described to *Railway Age* by the manufacturer.

Good and Bad in the Outlook for Railroads

This paper is inclined to believe that the situation of the railroads is likely to change a great deal—either for better or worse—between now and the time of next presidential election in 1956. Whether the turn is upward or downward depends a great deal on the vigor and intelligence with which the interested parties—owners and management, labor and suppliers—exert themselves to bring about changes in the railroads' environment—changes which are necessary, if the secular decline in the industry's relative importance is to be arrested and reversed.

And why is the present period a particularly critical one? Among several possible answers to that question, the following are outstanding:

1. The fact that the railroads' share of the nation's freight traffic has declined to but little more than 50 per cent of the total, with no indication as yet that the decline in the industry's relative position has ceased.

2. The approval of the St. Lawrence Seaway—which is almost certain to be a depressant upon railroad traffic and rates.

3. The support by the present Administration in Washington of a proposal to spend an additional and colossal $50 billion on stepped-up highway construction—without mention of any safeguards to provide that commercial traffic will be called upon to pay additional compensation for this great improvement in its highway plant.

4. The failure of the present Administration, so far, to enact—or even seriously to propose or support—even one single measure of the dozen or so urgently needed to give the railways a reasonably fair opportunity to compete equitably for traffic that they are economically suited to handle.

These auguries are all on the negative side and are serious—but it is still plainly possible to nullify and reverse these discouraging factors, if there is sufficient determination to emphasize the favorable ones. Among such are the following:

(a) The fact that the country is in mortal military danger—which is certainly not an auspicious time for pushing aside a form of transportation which can move 5,000 tons with 5 men, largely replacing it by an agency which requires one man for each 15 or 20 tons.

(b) The fact that non-management interests—among them, organized labor and suppliers—have, entirely on their own initiative, been endeavoring to put forth some effort to make common cause with the railroads in securing better understanding by the public of its interest in more sensible governmental dealing with transportation.

(c) The fact that, with all their political handicaps, railroad ton-mile costs are far below those of their principal competitors (i.e., the long-haul trucks), and that the railroads have, as yet, scarcely made a start in pricing their services to reflect their cost advantage, wherever it exists.

Other favorable factors could be cited—just as it would be possible to add to the list of negative forces—but the two foregoing lists ought to be sufficient to lend conviction to the two-sided assertion that—(1) if present unfavorable trends are allowed to continue unchallenged, the railroad situation is likely to be far worse a year or so from now than it is today, but (2) concerted attention, now, in support of the positive factors would, in all probability, abruptly halt the galloping anemia and give the railroads a more favorable outlook than they have enjoyed since the mid-twenties.

General Charles A. Lindbergh in a recent article in the Saturday Evening Post asserted, in effect, that—unless this nation proposes to initiate the threatened war, by attacking the enemy before he attacks us—then the only alternative is that we must develop so much *excess* military strength that, even after suffering a ruinous attack, we would still be stronger than the enemy. General Lindbergh concludes that, henceforth, our principal goal must be, not economic progress, but accumulation of the means of survival.

Our possession of more TV's, more electric washers and more other such gadgets than our adversary is not going to deter him from attacking us. Nor is our productive capacity going to put the fear of God into an enemy, as long as he sees us using it up in trying to put out of business a 1,000-tons-per-man transportation machine, replacing it with one where one man moves only 15 or 20 tons.

The hard facts of contemporary economics and military reality are, thus, all in favor of strong railroads. But people act only on information which is available to them—and, if those who possess the facts about the transportation situation are unduly modest in making this information generally known, then public policy toward transportation will not contribute much toward national survival, nor to the survival of railroading as a private business.

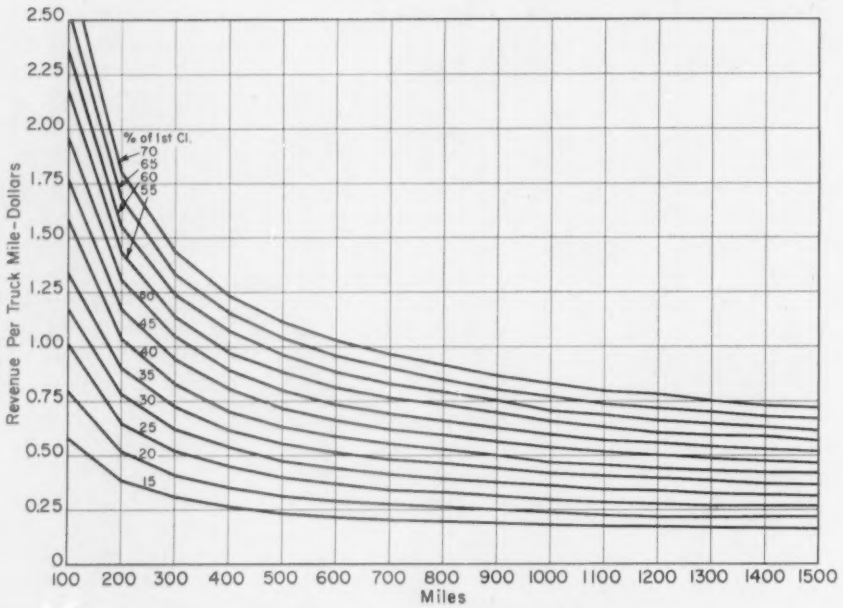
"Distinguished Contribution" in *Railway Age* Essay Contest

A Practical Rate

By WILLIAM K. TATE
Vice-President
Nashville, Chattanooga & St. Louis

It is quite proper to ask: "Are the difficulties of the railroads due to their unwillingness or inability to utilize technological advances to improve their service and reduce operating costs?" The answer is "No!" Within a relatively few years railroads have spent billions of dollars for reducing grades and curves, heavier rail, diesel locomotives, improved freight and passenger equipment, mechanical retarder yards, centralized traffic control, and other improvements too numerous to mention. In most, if not all, respects their technological progress compares favorably with that of any other industry.

The next question is: "Have the railroads utilized their inherent advantages to the fullest extent necessary to meet new competitive situations created by a virtual revolution in transportation?" Again, the answer is "No"; and herein lies the root of the trouble.



Revenue per Truck-Mile at Indicated Percentage of First Class
Docket 28300 Rates, Including Ex Parte 175 Increases, Based on Net Load of 30,000 lb.

What Are the "Inherent Advantages"?

In the following discussion every effort will be made to be as brief and objective as possible, and only freight traffic will be considered. Inasmuch as railroads cannot hope to meet terminal-to-terminal charges of pipe lines, or port-to-port rates of subsidized barge lines, no further consideration will be given these forms of transport.

In exploring the inherent advantages of railroads as compared with highway transport, certain fundamental differences are evident:

(1) Railroads have large fixed investments in roadway which in most, if not all, instances, are not used to anything like capacity. As a result, additional traffic reduces the unit cost of transportation, and a large part of the revenue from added traffic is reflected in net railway operating income. Since trucks have no investment in roadway, added traffic does not produce lower unit cost.

(2) By virtue of flanged wheels operating on steel rails, cars can be added to trains handling less than the rated capacity of a single power unit, and additional power units can be added with the result that gross trainload is limited only by drawbar capacity. Since railroads can operate 150 or more cars in a single train, and since the capacity of a car is greater than that of a truck, it is obvious that their direct transportation cost is substantially less.

(3) Privately owned roadway enables railroads to operate with a minimum of interference by other traffic, and a minimum of danger to other traffic.

(4) The combination of private roadway, locomotives and cars confined to rails by flanges, rigid inspection of roadway and equipment, centralized traffic control, interlockers and other safety devices, minimum interference by weather and other traffic, make railroads the safest and most dependable form of land transportation.

In summary, therefore, the inherent advantages of railroads are safety, dependability, and lower costs. However, railroad superiority with respect to safety and dependability is so slight that rarely, if ever, is it considered by shippers when determining the mode of transportation to be employed, and, for all practical purposes, therefore, *the only inherent advantage of railroads is lower costs.* By comparison, the trucks have many inherent advantages, including faster service, store-door delivery, lower minima, less cost for packing and bracing, etc.

Generally speaking, present railroad rates follow the pattern developed when railroads held a virtual monopoly on transportation, and which was designed to provide an equitable distribution of the so-called "transportation burden." In order to provide sufficient railroad revenue

Plan to Reflect "Inherent Advantages"

and at the same time encourage the free flow of traffic, rates were made relatively high per mile for shorter distances, sharply decreasing as distance increased. "Value of service" was an important factor, and the level of rates varied widely on commodities having almost identical transportation characteristics but different values.

This was an ideal pricing structure for a monopoly, but its continuation has enabled the trucking industry to expand at a phenomenal rate. Intercity revenues of Class I, II and III motor carriers for the year 1953 are estimated at $4,400,000,000, and intercity revenues of exempt motor carriers an additional $3,500,000,000. The total of $7,900,000,000 almost equals the freight revenues of Class I railroads. The railroads are handling a constantly decreasing share of the total traffic of the country, and their part consists principally of low-grade traffic, so-called "balloon" freight, and a relatively small amount of high-grade traffic for long distances, where the progression of rate scales makes the business unattractive to trucks.

The accompanying chart, showing revenue per truck-mile at rates made various percentages of first class, graphically illustrates the fallacy of longer continuing the present pattern of freight rates. It is generally agreed that truckload freight can be handled for approximately

HOW TO TAKE ADVANTAGE OF "INHERENT ADVANTAGES"

This presentation, somewhat condensed from one selected by the judges as a "distinguished contribution" in the *Railway Age* contest for the best essay on "Inherent Advantages of Railway Transportation" (July 5 issue), focuses on rate-making as containing the biggest potential for restoring the railroads' proper role in transportation. The complete text of this paper will be published in a forthcoming pamphlet, which will include about ten of the essays which were deemed by the judges to be the best.

Its author comes to these conclusions:

(1) The principal inherent advantage of railroads is that, generally speaking, their costs are lower than those of their highway competitors.

(2) The phenomenal growth of the trucking industry is due largely to the continuation of a long-outmoded railroad rate structure.

(3) Railroad rates should be constructed so as to reflect their lower costs, and, except in relatively rare instances, "value of service" should be disregarded. Rates should progress as a "straight line" within the effective range of truck competition, and beyond that point they should be constructed so as to produce the greatest amount of traffic and revenue. Some form of incentive should be offered to encourage heavier loading.

(4) Rail rates should be sufficiently lower than truck cost to compensate for the inherent advantages of trucks.

(5) Within the zone between out-of-pocket cost and maximum reasonable rates, railroads should be permitted to exercise managerial discretion in rate determination.

THE AUTHOR, trained as a civil engineer, has had an unusually versatile career in railroading since he went to work with the NC&StL in 1917 as a draftsman and topographer of a survey party. Having crossed departmental lines twice, he has had the peculiar advantage of looking at the railroad business outside the often-narrow confines of a one-department experience.

Until 1929 he was in the engineering department, moving up to assistant division engineer. In that year he shifted to industrial development and public relations, heading that activity after 1935. In 1937 he turned his energies to traffic, and he has been vice-president in charge of that department since 1946.

Mr. Tate has for some years been an active proponent of "a new look" in railroad rate-making, which ideas he sets forth in this essay.

25 cents per truck-mile, and adding 20 per cent profit produces a figure of 30 cents. By referring to the chart it will be observed that, at 30 cents per mile, trucks can profitably handle traffic rated 15% of first class for distances up to 320 miles; 20% up to 570 miles; 25% 980 miles, and 30% for more than 1,500 miles. It is apparent, therefore, that *carload rates which will produce earnings much in excess of 25 cents per truck-mile are merely "paper rates,"* with the trucks handling the traffic because of their superior service.

The same principle holds true with respect to LCL traffic, although, because of platform handling, pickup and delivery, both costs and rates are substantially higher. In the territory most familiar to the writer, the fully allocated expense of common carrier trucks, whose traffic is largely LTL, is approximately 54 cents per intercity-mile. This includes pickup and delivery as well as all other costs. Most LCL traffic is rated 70% of first class or higher, with very little under 50%, and a second glance at the chart makes it unnecessary to elaborate the fact that railroads have lost approximately 90% of LCL traffic.

Having no fixed investment in roadway, truck costs vary almost directly in proportion to mileage—in other words, *truck costs progress as a straight line*, and not until the recent past have railroads recognized this important feature in their efforts to meet truck competition. Generally speaking, the railroads have made rates designed to meet truck competition by making percentage reductions of existing scales. This has been almost wholly ineffective because at only one point in the scale does the rail rate exactly equal truck cost. At all other points the revised rail rates are either higher or lower than truck cost, with the result that the trucks continue to handle most of the business for shorter distances, while *the railroads have unnecessarily reduced rates on traffic they are handling for longer distances.*

How to Attain "Inherent Advantage"

In general, the pattern of truck rates follows that of the railroads, because this rate scale offers truckers the greatest opportunity for profit. In deciding whether or not to handle certain traffic, however, the trucker is interested only in the fact that revenue exceeds expense. He gives little thought to "value of service," and the trucker does not care whether his revenue is derived from hauling silk or sand. In order to meet this situation, *railroad rates as a general rule, should be constructed without regard to value of service, and should progress as a straight line within the effective range of truck competition.* Beyond this point rates should progress in whatever manner will produce the greatest volume of traffic and revenue, and some form of incentive should be offered to encourage heavier loading.

Inasmuch as the trucking industry started largely as a carrier of LCL freight, and since this traffic now produces more than 50 per cent of the revenue of regulated intercity motor carriers, we shall first discuss LCL rates.

The hope is expressed that the reader will not be too critical of the figures on which proposed rate scales are based.

Obviously the efforts of more than one person would be required to determine the figure which would represent average rail terminal cost of handling LCL freight or the fully allocated cost per ton-mile, or truck-mile, of common carrier trucks which should be used in determining competitive rate scales. While the writer developed tentative figures covering operations in his territory, they are illustrative only, because at present the problem is one of a new theory of rate-making rather than the determination of actual rate scales. Following are some basic facts and assumptions:

(1) The standard van type semitrailer used by common carrier truck lines for intercity service contains 1,910 cu ft, and it is assumed that it can be loaded to approximately 90% of visible capacity, or 1,700 cu ft.

(2) The standard box car contains 3,888 cu ft, and it is assumed that it, too, can be loaded to approximately 90% of visible capacity, or 3,500 cu ft.

(3) A recent study of operations at four rail terminals, in cities with populations ranging between 130,000 and 425,000, developed that the cost of pickup and delivery, platform, clerical and switching service of LCL freight averaged $4.65 per ton, and the cost of intermediate transfer $2 per ton. Based on this information an arbitrary figure of $12 per ton

HOW THE AUTHOR VIEWS COMPETITION

"The world of business has its Golgotha. It buries its own dead—the inefficient, the outmoded, the inept. It is subject to the universal law of change that welcomes improvement, and looks with indifference upon the consequent destruction of values, holding that, in the final analysis, this is an incident of small importance.

"There should be no complaint against the evolution or revolution that involves any agency of transport, so long as it continues to stand squarely on an equality under the law and on its ability to pay its own way without public subsidy. If it meets this business test, it deserves to live, quite regardless of the effect it may have on some rival form of transportation.

"The history of trade is a long road of unending struggle, and inevitably the weak and incapable give place to the strong and efficient. We wasted no pity on the stage coach and canal boat—we simply wrote them off our inventory. Nor should we now waste time with the railroads if they, too, have served only to be superseded by better modes and ways of doing the work for which they were designed. But we should be sure before, deliberately or otherwise, we cripple or destroy."

"For all practical purposes, the only inherent advantage of railroads is lower costs."

"If it be proper to relate rail rates to truck costs, it would be equally proper to relate pipe line rates to rail costs; the cost of natural gas to artificial; telephone toll rates to Western Union charges; or gas to electricity."

will be used to represent terminal costs at origin and destination, plus one intermediate transfer.

(4) Reports to the ICC by four trucking concerns in the writer's territory which handle principally LTL freight, and whose gross revenues are approximately $23,000,000 per annum, indicate fully allocated costs of 46, 54, 56 and 62 cents per intercity truck-mile. Since these concerns are closed corporations, it is believed that the wide fluctuation in per-mile cost may be due more to variations in salaries of officers than to actual differences in basic operating costs.

(5) Since it is impossible to determine from truck reports the fully allocated terminal costs, the writer assumed they are the same as rail, namely $12 per ton. The total number of tons handled by the trucks was multiplied by $12 and the result subtracted from total operating cost. The remainder was divided by the number of intercity truck-miles operated, which produced a figure of 32 cents per mile to cover all costs other than terminal.

The following statement shows the cost of truck handling at 32 cents per mile (excluding terminal) of commodities of various densities, assuming that the standard trailer is loaded to 90% of its visible capacity:

Class	Weight per Cu Ft in lb	No. tons per truck	Truck cost per ton-mile (¢)	Truck cost per 100 lb per 100 miles (¢)
1	3	2.55	12.55	63
2	5	4.25	7.53	38
3	10	8.50	3.76	19
4	15	12.75	2.51	13
5	20 and over	17.00	1.88	9

It will be noted that commodities weighing 20 lb per cu ft will produce a net load of 17 tons, which is approximately the maximum load common carriers of LTL freight can obtain.

The next statement shows suggested rate scales based on a constant terminal cost of $12 per ton, or 60 cents per 100 lb, plus the other costs indicated in the last column of the preceding statement—in other words that part of the rate representing line-haul progresses as a straight line. The proposed rates have been rounded out to the nearest "5" or "0":

	Rates in cents per 100 lb Class				
Miles	1	2	3	4	5
100	125	100	80	75	70
200	185	135	100	90	80
300	250	175	115	105	85
400	310	210	135	115	95
500	375	250	155	130	105
600	440	290	175	140	115
700	500	325	195	155	125
800	565	365	210	170	130
900	625	400	230	180	140
1,000	690	440	250	195	150
2,000	1320	820	440	325	240

In the following statement the above rates are expressed in percentages of Docket 28300 first class rates, including Ex Parte 175 increases:

	Per cent of First Class Class				
Miles	1	2	3	4	5
100	95	76	61	57	53
200	108	79	58	53	47
300	122	85	56	51	41
400	131	89	57	49	40
500	141	94	58	49	40
600	150	99	60	48	39
700	155	101	61	48	39
800	161	104	60	48	37
900	167	107	62	48	37
1,000	174	111	63	49	38
2,000	211	131	70	52	38

It will be noted that in Scales 1 and 2, covering low-density commodities, the percentage of first class increases with distance, while in Scales 4 and 5, covering higher-density traffic, the percentage of first class decreases with distance, while Scale 3 fluctuates up and down.

This is the result of mathematical computations based on the facts and assumptions previously referred to, and again illustrates the fallacy of establishing truck-competitive rates based on fixed percentages of first class.

While the same terminal cost has been employed for all classes, it is obvious that it would cost substantially more to handle a ton of freight weighing 3 lb per cu ft than one weighing 20 lb cu ft, and if the suggested method of rate making is given serious consideration such details could be worked out scientifically.

Since the terminal cost of 60 cents per 100 lb has been figured separately, each truckload of freight recovered at the suggested rates would produce *line-haul* earnings of 32 cents per car-mile. Inasmuch as the cubical capacity of a standard box car is twice that of a standard trailer, it should load twice as heavy, thus producing line-haul revenue of 64 cents per car-mile.

For Carload Rates

The situation with respect to carload and truckload freight is similar to that of LCL and LTL, except that most truckload traffic is handled by contract and private carriers, whose overhead and terminal costs are substantially less than those of common carriers handling principally LTL. In order, therefore, to compete successfully for truckload traffic, railroads should adopt the same principles suggested for LCL rates, namely straight-

"In order to compete successfully, therefore, rail rates must be sufficiently lower than truck cost to offer an inducement for shippers to use rail service."

line progression of rates based on weight per cubic foot and without regard to "value of service."

In determining the level of rates necessary to meet truck competition, we must not overlook the inherent advantages of trucks—such as lower minima and quicker delivery, which enable shippers and receivers to operate with smaller warehouses and lower inventories—with consequently lower cost of construction and interest charges; less cost of packing and bracing as well as less damage to goods in transit; free pickup and delivery, etc.

In order to compete successfully, therefore, rail rates must be sufficiently lower than truck charges to offer an inducement for shippers to use railroad service for transporting their goods.

The Role of Regulatory Bodies

Like the present rate structure, regulation of railroads was inaugurated at a time when they held a virtual monopoly of land transportation. Among other things, regulatory acts were designed to protect the public against unreasonably high freight rates and passenger fares; to prevent discrimination as between persons, places and commodities; and to prevent larger railroads from establishing non-compensatory rates for the purpose of bankrupting their smaller rail competitors.

Later, regulation was extended to cover other forms of transportation, but only in part. For example, there is no regulation of the rates of barge lines handling bulk commodities on the inland waterways, and, of course, bulk commodities represent by far the greater part of their traffic. Neither is there any regulation of the rates of motor carriers handling agricultural products, livestock and fish, and, of course, none whatsoever with respect to the transportation of property in private vehicles of the owner.

The National Transportation Policy is a clear, concise, statement which fairly can be interpreted in one way only—namely, that each form of transportation not only is permitted, but should be encouraged to exploit whatever inherent advantages it possesses in order that the public may have the safest, most efficient and most *economical* service possible.

As previously stated, the only inherent advantage of railroads is that, generally speaking, their costs are lower than their highway competitors'. The right of the railroads to utilize this inherent advantage was recognized by the ICC in *Petroleum and Petroleum Products, California to Arizona, 241 ICC 21,* dated July 8, 1940, when it said:

"If the costs of one transportation agency are so high as to prevent profitable operation at rates which permit the competing agency to perform satisfactory service to the public and to earn a good profit, it seems obvious that the high-cost agency in meeting the rates of the low-cost agency is attempting to compete on a non-profit basis. To direct the low-cost agency in these circumstances to increase its rates would be to disregard the admonition of both the Interstate Commerce Act and the Motor Carrier Act to give consideration 'to the need in the public interest of adequate and efficient . . . transportation service at the lowest possible cost consistent with the furnishing of such service.' *It would be regulation in the interest of the high-cost agency rather than in the public interest.*" (Emphasis added.)

It is axiomatic that no segment of business or industry, including transportation, can hope to reach its maximum of efficiency or usefulness unless its component parts are given the opportunity to exploit to the fullest extent whatever inherent advantages they possess. For each form of transportation there is a zone of reasonable rates between out-of-pocket cost on the one hand and maximum reasonable rates on the other.

Within this zone carriers should be allowed to exercise full managerial discretion, and, except when rates are thought to be non-compensatory, one type of carrier should not be permitted to protest the rates of another. Neither should regulatory bodies have the right to suspend or to fix minimum rates, provided, of course, the proposed rates are non-discriminatory and non-preferential. Rates thus made would actually reflect the inherent advantages of the different types of transportation, and shippers could select the one which more nearly meets their requirements.

Management Rights

In recent years there has been a growing tendency on the part of regulatory bodies to substitute their judgment for that of management with respect to the effects of proposed rate adjustments, and to deny the railroads the right to publish compensatory rates because of the possible adverse effect on their competitors. The defenders of this degree of regulation have gone so far as to say that it is not monopoly that needs regulation, but competition. In the writer's opinion this is unsound economics, militates against the best interest of the public, and is contrary to the principles of the Free Enterprise System—which is designed to preserve competition, not to preserve one's competitors.

If it be proper to relate rail rates to truck costs, it would be equally proper to relate pipe line rates to rail costs; the cost of natural gas to artificial; telephone toll rates to Western Union charges, or gas to electricity. It might be logical to go a step further and conclude that prices charged by an efficient supermarket should be no lower than those of a small neighborhood store which stays in business because of its convenient location and the fact that it is open nights, Sundays and holidays. Even if it should be thought in the public interest, there is no man or group of men with sufficient wisdom to divide fairly the transportation business of the country by manipulating the rates of one group of carriers in such manner as to increase or decrease the volume of business handled by others.

Free but fair competition is the inalienable right of every American, and its exercise has contributed largely to the phenomenal growth and high standard of living which this country enjoys. It is the writer's belief that each form of transportation should be permitted to employ every legal means it possesses to further its individual interest. Since, in most instances, railroads are the low-cost agency, this policy would result in shifting a large volume of traffic from truck to rail. The change, however, would be gradual, with the end result that the transportation industry would be stabilized, and the total transportation bill of the country substantially reduced.

LIGHT AND HEAVY freight car repairs are usually made on rip tracks under conditions not conducive to efficiency.

GOOD BUDGETING must consider long-range plans, and allow for proper maintenance of track and facilities.

The Railroad Budget:

• Weapon of oppression, or
• Tool of progress?

Though often misused and frequently abused, budgets are still one of management's most effective tools

By **JOHN E. KUSIK**
Vice President-Finance
Chesapeake & Ohio

To many railroad men, "budget" is a fighting word. The extent of this dislike for the term, however, can always be measured by the degree to which the railroad budget has been made a weapon of oppression, rather than a highly effective tool for good railroad management.

Any management—and every level of management—must have a good and practical budgeting system if it is to be continuously successful in the conduct of its business. A good budget is not restricting or confining. Properly used it is but a guide—a sort of road map—derived from careful consideration of the many different factors which must concern management.

That budgeting should be so greatly abused in railroading is somewhat perplexing. This because the basic problems of railroad management are no different than those that confront other industries. Through the years other industries have developed successful, practical budget systems which seem to be almost unknown in railroad circles. So what I set down here is neither new nor original. It is simply a run-down of some of the things other industries have learned about budgets and how to use them.

Perhaps part of the trouble lies in a poor or incom-

plete understanding, by the middle and lower levels of railroad management, of what a budget is and what it is supposed to accomplish.

To start at the beginning, why is budget making necessary at all? Isn't it sufficient to rely on *good*, up-to-date reports of current performance?

A general answer to these questions is quite simple. It's like the question, which way should a locomotive engineer face. Should he look ahead, watching the track and signals, and looking for stations and whatever else is required to reach his station stops and destination with safety, on time? Or should he look backward, studying the roadway over which he is passing?

Management, exactly like the engineer, cannot afford to spend much time looking back—it, too, must reach certain destinations and objectives within definite schedules. Moreover, it, too, must be on the alert for possible dangers ahead.

Budget making, when properly used, is one more device—although not by any means the only one—enabling management to look ahead and guide operations according to a plan, the signals it sees, and the judgments it forms on the basis of these signals.

What Is a Budget?

Frequently the word "budgeting" is used interchangeably with "forecasting." The main difference between the two is that budget making is supposed to indicate what ought to be done under certain circumstances, while forecasting is merely an indication of what is likely to happen. One is a standard; the other, a prediction.

There is a common inclination to think of budget making only in terms of controlling expenses. It is far more than that. It must be thought of in terms of revenues as well as expenses, and in terms of the problem of adjusting expenditures to income, planning so both ends will meet with something left over.

Above all, to be worth anything, budget making should be closely linked to the plans of the traffic, operating and maintenance departments, as well as to programs of capital expenditures and property improvements. In other words, it should not be a device put together primarily by the accounting department. Sound budget making calls for an interdepartmental, cooperative approach.

The study of methods and procedures is an essential adjunct of sound budgeting. Without such studies, the temptation is strong to try and make budgets a means for achieving economies—something for which budgets are poorly suited. Here may lie the roots of some railroad budget troubles.

To illustrate what studies of methods improvement can accomplish, consider the problem and expense of maintenance of way. In recent years several railroads have converted from a section gang form of organization to larger district gangs, equipped with automatic machinery, trucks and buses. These gangs are planned to get the maximum effective production per man hour paid for. On the C&O—as on other roads using the system—this change in methods has led to continuing savings of many millions of dollars each year. No amount of budgetary pressure or "squeezing" could have produced a comparable savings.

As another example, consider the matter of light and heavy freight car repairs which are usually made on yard rip tracks. On most railroads, light repairs are given each month to a number of cars roughly equivalent to 50 per cent of the total freight cars on the line. This work is usually done in the open—in rain or snow, subzero winds or blazing summer sun—often with poor working space and inadequate tools and materials. Obviously such conditions are not conducive to efficiency, and the cost of doing this work must be excessive. But the way to reduce this cost is by a careful study of methods and procedures—*not* by shrinking or "squeezing" the budget, even though everyone may agree promising possibilities are there.

Sound budget making is supported by continuous search for improved methods and procedures.

Short-Term Budgets

A budget can be made to cover any period of time from a week to several years. Before selecting a "budget period" it would be well to stop and consider whether the expenses to be guided by it fluctuate "naturally"

HOW NOT TO USE A BUDGET

I have been told how some railroads place local superintendents on strict monthly budgets, which usually do not have enough slack to allow for unexpected increases in traffic, unusual weather conditions, or anything the least bit out of the ordinary. When these unusual conditions occur—as they usually do—the superintendent is forced to lay off part of his yard and station forces toward the end of the month to stay within the confines of his budget. Then the first of the following month he must work his crews overtime to clear up the accumulation. There are frequent large claim payments for delayed freight and mail—but this doesn't concern the superintendent because it is not included in his budget. This is a graphic illustration of how using budgets in an attempt to achieve cost control actually leads to cost increases.

From other sources I have learned how similar budgets have forced passenger and freight car repair shops to work on a stop-start basis, laying off most of the men near the end of the month—or of the quarter—and putting them to work overtime at the beginning of the next budget period in order to get caught up. This practice not only leads to high repair costs, but to a somewhat lower quality of workmanship because the good workers leave to seek steady employment elsewhere. At least one of these roads is troubled with particularly poor standards of passenger car maintenance in the face of unusually high costs.

FOUNDATIONS OF THE BUDGET

Consider the major forces which shape the direction and destinations of management planning, and to which budget making must be linked. There are four factors on which management planning must depend, just like train operation depends on railroad tracks and schedules:

(1) *Present and prospective level of traffic* activities. This is, of course, important because traffic levels determine the incoming revenues which will become available for operating and other purposes.

(2) *Present condition of the operating plant*—roadway, motive power and rolling stock—and its adequacy for present and prospective needs. This should include requirements for long-term research and development.

(3) *Need for storm or depression reserves* which should be on hand and available for unforeseen contingencies.

(4) *Net income and dividend standards* which must be maintained by management consistent with the interests of security holders and internal requirements.

You will recognize important conflicts between these forces from the standpoint of their demands for funds.

The skill with which management balances these conflicts determines how attractive the individual railroad's securities will continue to be to investors, and whether the railroad will remain sound and capable of producing efficient service. This managerial balancing of operating and financial requirements, so important for proper planning and budget making, is no different from the juggling act performed every day by division superintendents.

Sound budget making requires proper balancing of operating and financial requirements.

over the short term (like in operations) or over the longer term (like in maintenance). Clearly, in the railroad industry, the largest proportion of expenses fluctuate "naturally" over the longer period. For example, therefore, best results in maintenance will be obtained generally through annual budgeting.

Short-term budgets, when properly used, can be very useful in providing operating standards. Frequently, however, the major purpose of short-term budgets is to operate as "brutal" cash conservation and accounting devices in emergencies. In these circumstances, they cease to be useful for real cost control and cost reduction purposes. They are then used to create a brighter, more attractive surface picture of financial conditions regardless of cost and human relations consequences. They thus destroy efforts to achieve orderly planning, and make it difficult to perform work at most advantageous times.

Sound budget making aims at improvement of net income and is not concerned with surface pictures. What is the underlying cause of this persistence in the misuse of short-term budgets?

Flexible Budgets

In a few cases, it may be attributed to an extremely weak financial position and grave danger of running out of cash. But even in these instances, much better results and large savings can be obtained by proceeding on the basis of longer-range planning. The point is that more money will be expended during a period of a year through operations on a crude short-term budget basis than on a more flexible long-term basis.

With the improved financial condition of the railroad industry as a whole, shortage of funds should not be used as an excuse anyway. So we must look for other reasons. One of them undoubtedly is a lack of knowledge about costs and the effect upon costs of sudden arbitrary work reductions. Another is unwillingness to spend time and money on serious studies of methods and procedures. Still another reason may be unfamiliarity with the way other industries have resolved similar problems through the development of "flexible budgets" for use where annual budgets do not apply. The problem of having to cut costs when business falls off is not new and not peculiar to the railroad industry.

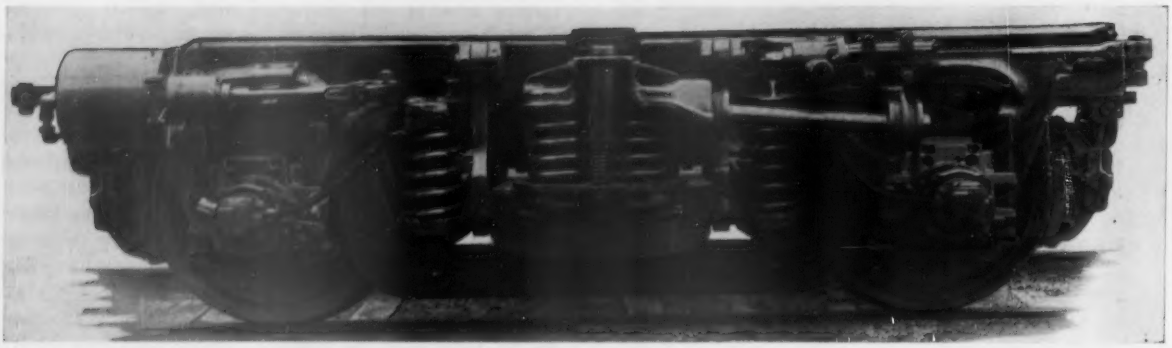
For some decades now, other industries have been using so-called "flexible budgeting," which is a combination of accounting and methods studies tailored to local conditions. This type of "flexible budgeting" cannot be developed on an individual railroad without first getting into a careful study of operating and maintenance methods.

Aside from all of these specific reasons, there is something else. It seems that on many railroads individual departments have gotten out of the habit of working with one another to the point where they now have little understanding about each other's jobs. The decision making at the top level may be in the hands of operating men who do not understand costs and finances, or financial men who do not understand operations.

The handicap to proper budgeting does not lie in the lack of specialized knowledge. No man can be expected to know everything about everything. The handicap lies in men of various departments not spending enough time together in order to develop broader understanding of their common problems. This appears to be the most serious explanation for misuse of short-term budgeting.

Good and proper budget making is an important tool in management, and in planning for what lies ahead. For any railroad to obtain an effective budget system, it is essential to construct carefully a system tailored to its particular requirements—without expecting it to produce wonders for which it is not suited.

Budgets can only operate through people. If they are used for oppressive purposes, they will generate resistance and suspicion which will extend far beyond the area of relationships necessary in connection with budgets. In all of our activities—including budgeting—we must recognize the need for cooperation.



THE COMMONWEALTH four-wheel truck has all-coil springs, outside swing hangers, wide bolster-spring base, Central Bearing and friction snubbers.

Truck Safety and Economy

How these desiderata are realized today in American passenger car truck design

By R. L. LICH

American railroads are especially interested in safe transportation as influenced by passenger-car truck design. Every detail of construction must be considered from a safety standpoint. Examination of the Commonwealth four-wheel outside-swing-hanger truck with Central Bearings discloses many such considerations.

The backbone of the truck is the frame, a rugged one-piece steel casting. Because of its integral structure and because it is cast, the metal can be most economically and effectively distributed. This produces the strongest structure for the lightest weight. Stress concentration points are likewise reduced to a minimum because there are no joints and because transitions of section through members and from one member to another can be made in a smooth and gradual manner.

General Steel Castings produces the major steel castings used in Commonwealth trucks; the frames, bolsters, spring planks, body and truck Central Bearings. Close control can therefore be maintained over their quality.

In examining, for example, the latest Commonwealth outside swing hanger truck, it will be noted that the truck is an assembly from the wheels to the Central Bearing. Safety features in the truck design include:

Multiple coil springs—The breakage of one or several coils is not detrimental to safe operation.

Equalized design—If one group of equalizer springs becomes ineffective the other keeps wheels under load.

Wide bolster spring base—In case of swing-hanger or swing-hanger-pin failure the spring plank is supported by the equalizers.

Bolster position—The bolster passes under the truck-frame wheel pieces thus securely positioning it.

The author is assistant to vice-president—engineering, General Steel Castings Corporation, Granite City, Ill.

Springs and swing-hanger parts are readily accessible for safety inspections.

Pedestals provide a safe and positive way to hold the journal boxes with respect to the frame.

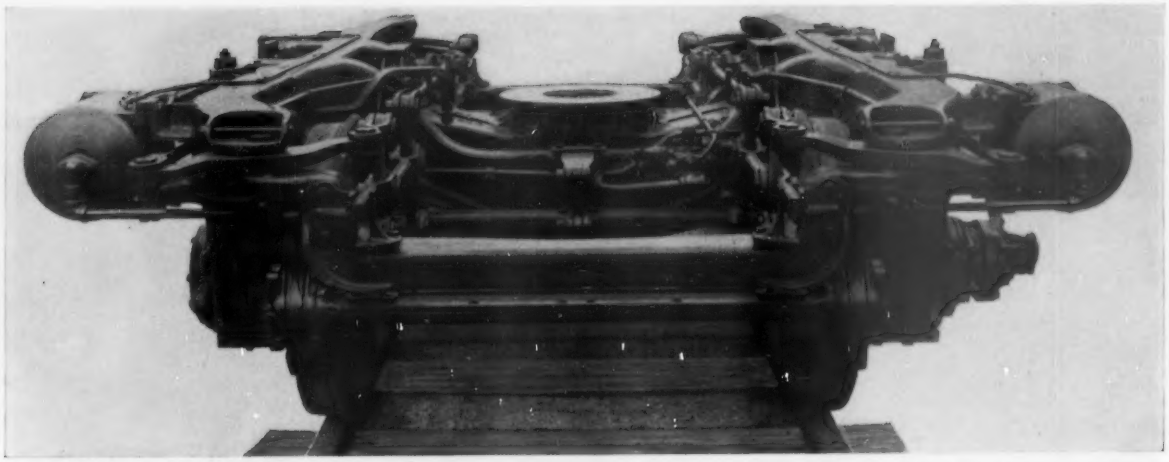
Pedestal tie bars prevent the journal boxes from leaving the pedestals.

Safety factors in design—From many years of experience safe allowable stresses have been determined for various parts of the truck. These include allowances for impact and fatigue. Commonwealth trucks meet all AAR standards and safety requirements.

The American railroad traveler expects and is entitled to comfortably riding cars. Good riding quality is particularly important in sleeping and dining cars. Several factors, exclusive of the trucks, which affect the riding of passenger cars are track and roadbed conditions, speed and operating practices, position of the car in the train consist and condition of adjacent cars, and the dynamic characteristics and weight of the car body.

With respect to the trucks, the following factors influence riding quality: Spring static deflections (vertical and lateral), ratio between bolster and equalizer spring static deflections, damping (vertical, lateral, longitudinal, internal and rotational), location of springs in truck structure, position and type of bolster anchors, ratios of truck part masses and truck to car-body weight, wheelbase, truck centers and ratio between them, dynamic characteristics of truck parts, wheel condition and tread contour and lateral motion characteristics.

Many details of truck design covered by the above factors have been determined by cooperative testing between General Steel Castings and the railroads. Through the years tests have been conducted which covered springing, weight distribution, member placement, lateral motion systems, and damping problems, to mention a few. Recently in the development of the Central Bearing sev-



HOW BRAKE CYLINDERS and clasp brakes are applied. This truck has the new Central Bearing.

eral railroads cooperated extensively with the manufacturer in test programs.

One of the most disagreeable of passenger-car motions is shimmy. The energy-absorbing character of the Central Bearing has been found most effective in surpressing and eliminating this action.

Because of the wide bolster spring base in the outside swing-hanger truck the stability of the car body has been greatly increased and the arrangement permits use of more resilient bolster springs.

Minimum Maintenance

To assure minimum maintenance, American passenger-car trucks must be rugged in construction and simple in design. Long runs, high speeds, high labor costs, short layovers and maximum availability make it mandatory that maintenance of trucks be held to a minimum consistent with satisfactory performance. Commonwealth truck designs are directed to this end.

Integral pedestrals have been found to be the simplest and most effective way to keep the journal boxes spaced and oriented. Hardened steel pedestal liners have long life and require little attention. By employing pedestals, pivoted journal-box members used on some European designs are avoided. Such pivoted designs necessarily must be maintained in good condition to operate properly.

To minimize brake maintenance, the brake rigging is attached to the frame which is supported by the equalizer springs. Thus the brake parts are not subjected to direct rail impacts.

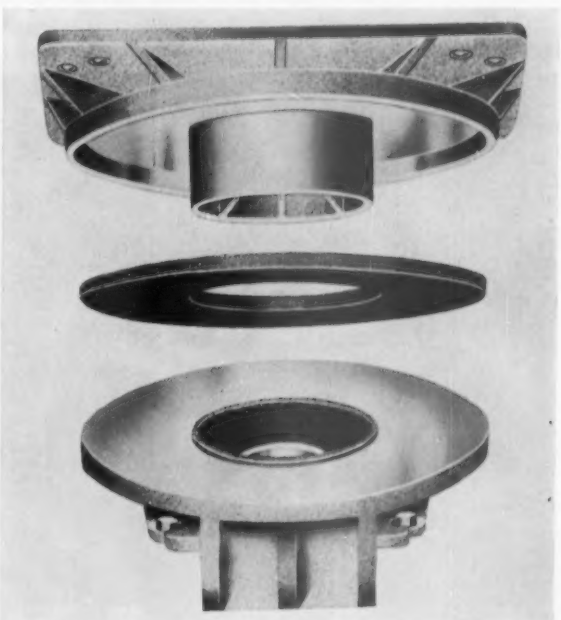
The trucks are designed for ease in replacing springs. This is particularly true for the bolster springs in the outside-swing-hanger truck.

One of the big maintenance problems through the years has been the adjusting of side-bearing clearances. The Central Bearing with its large diameter is able to resist normal car body overturning moments thus eliminating the necessity of side bearings and the accompanying maintenance. Safety stops are provided for emergency overturning moments.

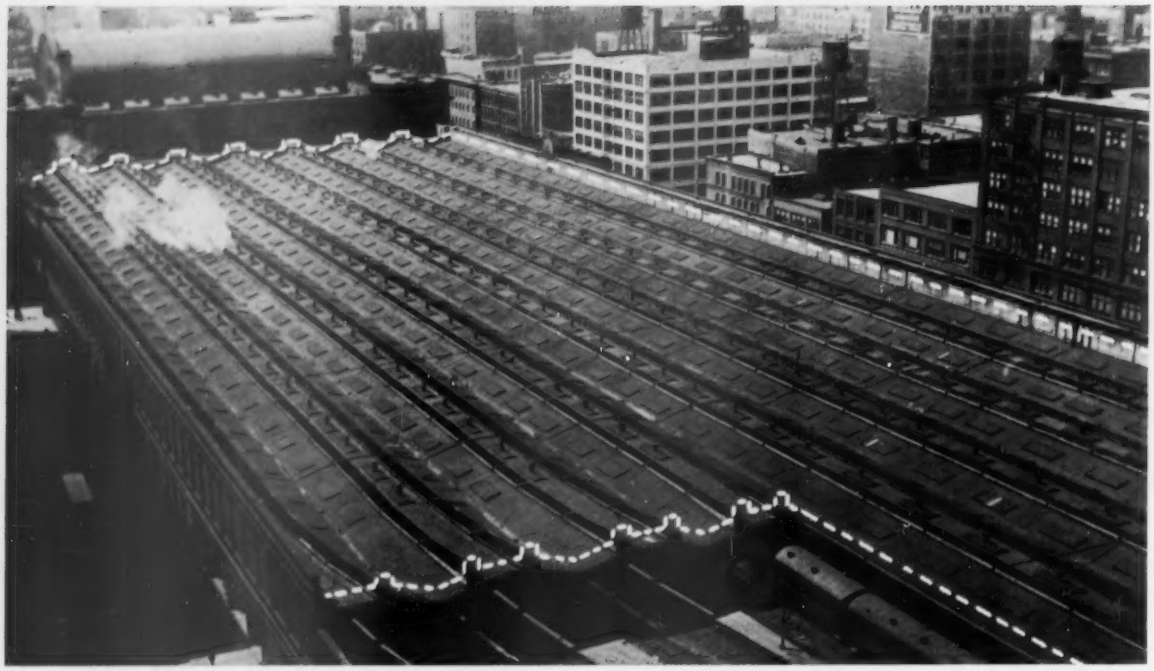
With the friction snubber, maintenance costs are reduced because they require less attention and operate over longer periods of time without reworking. Their simple construction makes it possible for the railroads to rework the devices themselves quickly and inexpensively in their own shops.

American passenger-car trucks must meet a wide variety of operating conditions. Because of long runs over various terrain, cars travel at a variety of speeds over tangent to highly curved track, over different kinds of roadbed under various degrees of maintenance. Through all of these conditions satisfactory truck operation must result. Commonwealth equalized trucks have been found to be more adaptable to varied operating conditions than have other passenger-car truck designs.

(Continued on page 31)



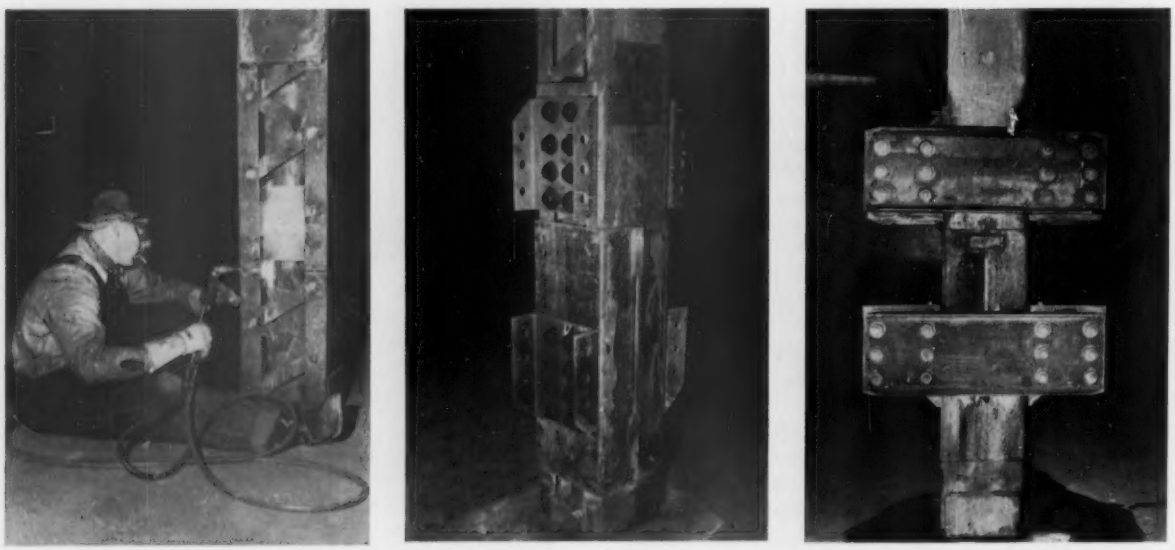
THE CAR-BODY and truck Central Bearing castings are separated by a 24-in. diameter friction disc. The bearing controls shimmy and functions both as center plate and side bearings.



THE PROBLEM: **TRAINSHED ROOF weighs approximately 10,000 tons and covers six acres. Dotted line shows final elevation of the roof.**

How C&NW "Raises the Roof"

Project at Chicago is required to provide 12 in. additional clearance needed for dome cars and gallery-type suburban coaches



THE ANSWER: **Steel plates are arc-welded to the latticed sides of the columns, the lattice bars below these plates are removed and the column is severed (left) in two stages as U-shaped plates (center) are clamped and welded to the lower stub of the column to form a sleeve which will retain the upper portion and permit it to move "telescope" fashion. Short channels will support jacking frames (right) composed of channels bolted to the supports with 1-in. high-tensile bolts.**

The entire trainshed roof at the passenger terminal of the Chicago & North Western in Chicago is being raised, uneventfully and smoothly, as a result of skillful planning, coupled with close cooperation between the road's operating and engineering departments. The roof covers an area of 265,800 sq ft (6.1 acres) and weighs approximately 10,000 tons. Additional clearance is necessary to permit operation of dome cars and gallery-type suburban coaches expected to be in service in the fall.

The work is progressing without delay to the 178 suburban and 58 through trains which daily enter and leave the 16 stub-end tracks of this terminal, or inconvenience to their more than 90,000 daily passengers.

This terminal was placed in operation in 1911. The trainshed consists of a steel-and-concrete roof carried by a series of arched girders spanning each pair of tracks and supported by a line of columns along the center of each platform. The clearance between the bottom of the smoke slots and the top of rail was 15 ft 4½ in. There are 270 roof-supporting columns arranged in 8 longitudinal rows, with 30 to 36 columns per row.

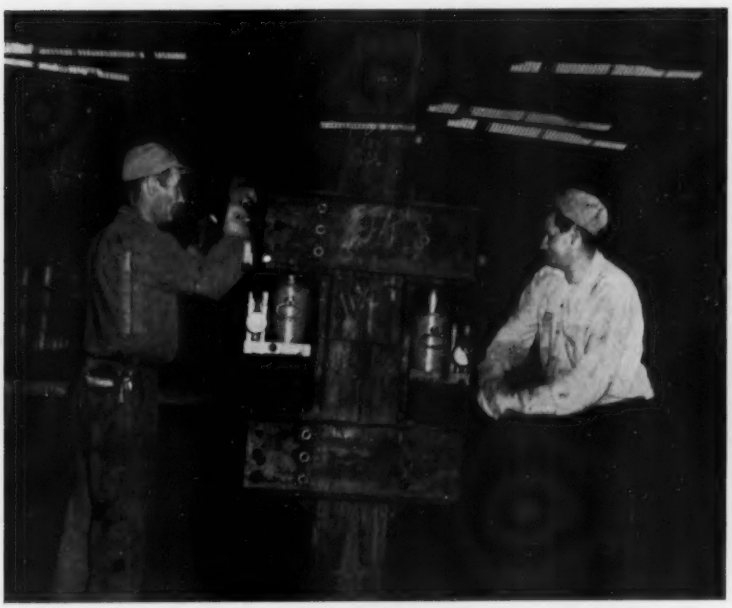
The plan adopted for raising the roof is basically simple in conception, but in execution it entailed a high degree of engineering skill. Expressed in the barest terms it consists of severing each of the steel roof-supporting columns at a point near the bottom and jacking up the upper portion 12 in. First, however, a steel sleeve was welded to the column below the cut, in which the upper portion of the column was free to move "telescope fashion" as it was jacked up. The sleeve was necessary to prevent displacement of the upper portion of the columns during the jacking operation.

Other preparatory work involved application of a jacking frame to each column, consisting of an arrangement of channels bolted to the column above and below the cut. Special 50-ton hydraulic jacks were used for the jacking operation.

STEEL-AND-CONCRETE ROOF, of the Bush type, is carried by a series of arched girders spanning each pair of tracks and is supported by a line of center columns.

The jacking work was started at the north end of the trainshed, and each transverse line of columns was jacked simultaneously. Since ½ in. was established as the permissible differential in the amount of jacking between successive columns longitudinally, this was used as the jacking increment. After each column has been jacked up the full amount the upper portion of the sleeve is arc welded to the column and the frame removed.

Adding to the complexity of the project was the fact that provision had to be made for cutting the trainshed loose from its connections along the sides and at the south end where it joins the train concourse, and then refastening it at the new elevation. It is expected that the actual lifting operation will require approximately five weeks.



TWO 50-TON hydraulic jacks are used to raise each column. They are equipped with gages which prevent eccentric lifts and twisting of the columns. Note the follower plates in position during jacking operation.

COLUMN COMPLETELY RAISED and welded. Black line shows separation between upper and lower ends after raise.

Financial

(*Continued from page* 11)

Mr. Thomas purchased the railroad outright in 1938. The CW is fully dieselized.

Erie.—*Buys NJ&NY Bonds.* — In connection with its recent offer to purchase outstanding bonds of the New Jersey & New York, in which it is a majority stockholder, the Erie has announced that it already has acquired $345,000 of $394,000 outstanding first mortgage bonds and $555,000 of $628,000 outstanding general mortgage bonds. Purpose of the offer is to expedite reorganization of the NJ&NY. The Erie has arranged to have the First National Bank of New York accept tenders on the NJ&NY's first, second and general mortgage bonds and to make payments at various specified prices.

New York, Chicago & St. Louis.—*Operating Agreement.*—The ICC has authorized renewal of a 1953 agreement whereby this line acquired joint use of passenger facilities and certain tracks owned by the Delaware, Lackawanna & Western at Buffalo. The new agreement will continue in effect until terminated by either party.

Securities

SP Would Issue New Bonds Worth $21,091,000

The Southern Pacific has requested Interstate Commerce Commission approval for a "nominal issue" of $21,091,000 in bonds, partially to reimburse the SP treasury for various additions-and-betterments expenditures during the past nine years. The SP would hold the bonds in its treasury to use when and if needed for operating costs.

Authorizations

CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC.—To assume liability for $5,100,000 of equipment trust certificates, to finance in part 56 diesel road-switching units, 50 "Airslide" hopper cars, and two sleeping cars costing an estimated $9,890,844 (**Railway Age,** June 28, page 24). Division 4 approved sale of the certificates, part of a $7,800,000 issue, with a 2¾% interest rate, for 99.313—the bid of Halsey Stuart & Co.—which will make the annual cost of the proceeds to the road approximately 2.86%. The certificates, dated July 1, will mature in 30 semiannual installments beginning January 1, 1955. The certificates were reoffered to the public at prices yielding from 1.4 to 2.95%, according to maturity.

MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE.—To assume liability for $1,950,000 of equipment trust certificates to finance in part 400 50-ton box cars costing an estimated total of $2,440,000 (**Railway Age,** June 14, page 77). Division 4 approved sale of the certificates, with a 2⅞% interest rate, for 99.573—the bid of Blair, Rollins & Co.—which will make the annual cost of the proceeds to the road approximately 2.94%. The certificates, dated August 1, will mature in 30 semiannual payments beginning February 1, 1955. Certificates maturing between 1955 and 1959, inclusive, were reoffered to the public at prices yielding from 1.6 to 2.6%, according to maturity; certificates maturing between 1960 and 1969, inclusive, were not reoffered.

NEWBURGH & SOUTH SHORE.—To issue, without competitive bidding, unsecured promissory notes not exceeding $275,000 in aggregate to evidence a loan from the parent United States Steel Corporation. Proceeds will be added to the line's working capital.

Security Price Averages

	July 27	Prev. Week	Last Year
Average price of 20 representative railway stocks	71.09	69.02	63.31
Average price of 20 representative railway bonds	95.96	95.32	90.27

Dividends Declared

ATLANTA & WEST POINT.—$1, payable August 2 to holders of record July 21.

NEW YORK, CHICAGO & ST. LOUIS.—common, 75¢, quarterly; 6% preferred A, $1.50, quarterly; both payable October 1 to holders of record August 27.

PEORIA & BUREAU VALLEY.—$2.12½, semiannual, payable August 2 to holders of record July 30.

WESTERN OF ALABAMA.—$5, payable August 2 to holders of record July 21.

OHIO BRINGS MORE CHARGES AGAINST TRUCKER RISS

The state of Ohio is stepping up its efforts to rule an interstate trucking company off its roads for "willful, constant and flagrant" violations of Ohio laws and regulations.

The state told the Interstate Commerce Commission at an informal conference July 9 that it would soon add new, more elaborate charges to its petition asking the ICC to deprive Riss & Co. of Kansas City of the right to operate in Ohio. Ohio's attorney general, C. William O'Neill, said the new charges list more than 1,270 alleged Ohio law violations involving Riss trucks over a 4½-year period.

Last month's conference was the latest episode in an action that started two years ago when Ohio accused Riss drivers of 596 Ohio law violations and asked the ICC to ban the carrier from Ohio. The new charges list another 676 violations allegedly committed by Riss drivers in the 18 months immediately following Ohio's first complaint.

Railroad spokesmen say the case marks the first time a state has sought this form of ICC protection from an interstate trucker who repeatedly violates the state's laws. Defeat for Ohio would, they fear, set a precedent for more flagrant violations, to the still greater detriment of all law-abiding carriers.

Ohio's voluminous records show that Riss is not alone in its contempt for Ohio's laws, according to the state Public Utilities Commission. Among the interstate truckers on the "blacklist" are at least five that have been convicted of more than 150 overloads each during a 20-month period; one of these is a Detroit company with a record of 359 arrests for overloading.

Although Ohio may legally suspend or revoke the operating permits of intrastate carriers, it has no similar control over interstate lines. This authority rests in the ICC, which may revoke a certificate for "willful" violations of state laws either on its own initiative or at the request of any state.

Ohio's 1952 petition to the ICC asserted that Riss "is not a fit or proper party to operate through the state of Ohio" and asked for ICC revocation of Riss's interstate certificate as it applies to Ohio. The commission, sustaining a defense motion by Riss, ordered Ohio to produce more detailed and specific data on every violation, including such information as name of driver, time and place of court hearing, if any, and disposition. Ohio complied with this order last May; then announced the added charges against Riss at this month's conference.

Mr. O'Neill said the latest complaint, which would be filed within two weeks, showed that Riss, far from cutting down on its violations, actually seemed to be doubling them. In the 18 months after the first complaint was filed, Riss's alleged violations averaged 37 a month, as compared with 20 a month during the 2½ years preceding the first complaint.

Ohio is ready to press for the revocation on the basis of all 1,272 violations, he said. "They are all a matter of court record and no one denies them," Mr. O'Neill added. "There must be some method of compelling this carrier to comply with our laws."

Railway Officers

NYC Announces Public Relations Changes

Theodore E. Applegate, director of the New York Central's news bureau since July 1, 1953, has been given the added title of acting manager, public relations. Also announced were the resignations of Raymond F. Blosser, manager of public relations; James R. Brugger, assistant manager of public relations; and Daniel B. Priest, assistant to director, news bureau.

BALTIMORE & OHIO.—Harold A. Williams, general freight agent, sales and service, at Baltimore, has retired after more than a half-century

of service. **George E. Dove,** general freight agent, sales and service, at Chicago, succeeds Mr. Williams at Baltimore.

Karl F. Wright, captain of police, Baltimore division, has been appointed superintendent of police, Eastern region, at Baltimore, succeeding **Irvin R. Jones,** whose appointment as general superintendent of the police department was noted in *Railway Age* June 28.

CENTRAL OF GEORGIA.—Albert G. Stanford, general agent at Chicago, has been transferred to head a newly opened sales and service agency at Minneapolis, which will serve shippers in Minnesota, Wisconsin and the Dakotas.

Horace W. Waters, superintendent of the Macon division, has been appointed general superintendent transportation at Savannah, succeeding **R. E. Sease,** promoted. **Edward D. Glenn,** trainmaster at Macon, succeeds Mr. Waters. **Fred C. Laing,** trainmaster at Albany, Ga., has been transferred to Macon, and **C. R. Johnson, Sr.,** has become trainmaster-road foreman of engines at Albany.

The position of assistant to vice-president and general manager and director of personnel, held by **W. J. Collins,** has been abolished; he has been appointed director of personnel, at Savannah.

CHESAPEAKE & OHIO.—T. A. Keefe has been appointed division freight agent at Grand Rapids, Mich. **G. A. Jones, Jr.,** succeeds him as general agent there.

E. W. Staubs has been appointed assistant general freight claim agent at Detroit.

D. A. Edwards, assistant budget director, has been elected assistant treasurer.

DENVER UNION TERMINAL.—A. R. Shaw, manager—mail, baggage and express of the Illinois Central, at Chicago, has been appointed secretary-manager of this company, at Denver. Mr. Shaw joined the IC in 1925 as stenographer, becoming transportation inspector in 1940 and assistant trainmaster in 1941. He was trainmaster at Chicago and Memphis before being appointed manager—mail, baggage and express in 1951.

GEORGIA & FLORIDA.—W. K. Beebe has been appointed assistant to chief operating officer at Augusta, Ga.

GRAND TRUNK WESTERN — CANADIAN NATIONAL.—Paul C. Hankey, general freight agent—sales, has been appointed assistant freight traffic manager, with headquarters as before at Chicago. **Walter J. Gohr,** foreign freight agent, has been named general freight agent there.

GREAT NORTHERN. — E. J. Hanggi, city ticket agent at St. Paul, has been named district passenger agent at Detroit, succeeding **P. C. Ivory,** now city freight agent there.

NEW HAVEN. — E. Frederic Uhrbrock, Jr., has resigned as assistant vice-president. He is now connected with the Amoskeag Company; and is also special consultant for the New York Stock Exchange firm of Vilas & Hickey, where he headed the research department before he went with the New Haven July 15, 1953.

NEW YORK CENTRAL. — Stephen T. Keiley, general superintendent of the subsidiary Boston & Albany, at Boston, has been appointed manager of passenger transportation for the NYC, at New York, succeeding **George H. Baker,** who has retired after 48 years of service. A picture and sketch of Mr. Keiley were published in *Railway Age* July 21, 1952, page 60, when he was appointed superintendent of the NYC's St. Lawrence, Ottawa and Adirondack divisions, the position he held before going to the B&A.

Clyde F. Meyers, terminal superintendent of the subsidiary Lakefront Dock & Railroad Terminal at Toledo, has been appointed superintendent of the Toledo Terminal, another NYC subsidiary. **William Henry,** trainmaster at Toledo, has been named as his successor.

PENNSYLVANIA.—B. W. Tyler, assistant general manager, Central region, has been promoted to assistant

B. W. Tyler

to vice-president of that region, with headquarters as before at Pittsburgh, succeeding **Rufus H. Flinn,** who completed 51 years of service February 1.

Herbert M. Phillips, freight traffic manager at Chicago, has been transferred to Pittsburgh, succeeding **Robert H. Miller,** who has retired after more than a half-century of railroad service. **Christy G. Magruder,** general freight agent at Chicago, succeeds Mr. Phillips as freight traffic manager there.

Mr. Magruder entered PRR employ in 1923 in the office of general freight agent at St. Louis; and was named division freight agent there in 1940, transferring to Pittsburgh in 1942.

Christy G. Magruder

Three years later he was appointed assistant general freight agent at Philadelphia and in 1948 was advanced to general freight agent at Chicago.

Dr. Graham A. Vance has been appointed regional medical officer at Chicago. **Dr. John McLaughlin** has been named regional medical officer, Central region, at Pittsburgh.

R. E. Walton, assistant general

"LEGAL STRAIT JACKETS designed to control excesses of 19th century monopoly must be discarded for the working clothes of much greater managerial freedom for the free competition of the last half of the 20th century," W. Arthur Grotz (right), president of the Western Maryland, told the National Editorial Association. Editors can, he said, "contribute to maintaining a healthy transportation industry . . . by continuing to encourage . . . progressive attitudes in management and government."

freight agent at Pittsburgh, has assumed the duties of **E. W. Saville,** also assistant general freight agent at Pittsburgh, who has retired after more than 52 years of service. **H. H. Ramsay,** district freight agent at Chicago, succeeds Mr. Walton. **H. D. Morris,** division freight agent at Detroit, succeeds **M. J. Boylan,** with the same title and headquarters as before. Mr. Boylan has retired after more than 50 years of service. **C. Robert Burr,** assistant general freight agent assigned to special duties, has been promoted to general freight agent at Chicago.

PULLMAN COMPANY.—John W. Vanderlaag, assistant manager—car service employees at Chicago, has been appointed superintendent at Portland, Ore., to succeed **P. L. Pflager,** who retired August 1, after 52 years of service.

RAILWAY EXPRESS AGENCY.—Charles C. Gaudio, assistant general manager of the air express division, has been appointed general manager of that division, succeeding **P. H. Cummings,** retired.

Klink Garrett, district sales representative at San Antonio, Tex., has been named government traffic representative at Washington, a newly created position.

SOUTHERN.—T. H. Seay, executive consultant at Washington, D.C., retired May 31, after more than half a century of service with this road. Mr. Seay had served as comptroller for 22 years prior to his appointment as executive consultant last January.

Charles S. Burnham has been appointed trainmaster at Birmingham, Ala., succeeding **Versie R. Valentine.**

A. G. Bohorfoush, assistant general purchasing agent, has been appointed general purchasing agent, at Washington, D.C., succeeding **E. E. Hanson,** who retired on July 1 after more than 53 years of service. **J. B. Cady,** assistant to general purchasing agent, has been appointed assistant general purchasing agent.

A. G. Bohorfoush

Mr. Bohorfoush was born at Bessemer, Ala., July 18, 1902, and joined the Southern in March 1917 as stenographer-clerk in the stores department at Birmingham. After serving as chief of stock records, assistant chief clerk in purchasing department and assistant to general purchasing agent, he was named assistant general purchasing agent in June 1946.

Herbert C. Fox, division engineer at Greensboro, N.C., has been promoted to the newly created position of process engineer at Atlanta.

Darrow Kirkpatrick, assistant freight traffic manager, has been appointed freight traffic manager (rates), with headquarters as before at Atlanta, Ga.

Mr. Kirkpatrick was born at Montgomery, Ala., May 3, 1898, and entered the Southern service as messenger at Washington in February 1914. He served successively in various clerical positions in the freight traffic department; as chief clerk to general freight traffic manager; as assistant general freight agent at Washington and Atlanta; and as general freight agent at Atlanta, and became assistant freight traffic manager in May 1953.

Darrow Kirkpatrick

W. C. Raper, coal freight agent at Atlanta, has retired and has been succeeded by **Hugh L. Marston.**

OBITUARY

Don Ashton, retired executive assistant in charge of public relations of the **Burlington,** died July 24 at Los Gatos, Cal.

William B. McKinstry, retired comptroller of the **Illinois Central,** died July 26 at his home in Savannah, Ga.

Raymond E. Dugan, general industrial agent of the **Rock Island,** at Chicago, died in his office there on July 19.

Ralph W. Jennings, advertising manager of the **Burlington,** died in MacNeal Memorial Hospital, Berwyn, Ill., on July 20.

Meetings and Conventions

The following list gives names and addresses of secretaries, and dates and places of next or regular meetings.

AIR BRAKE ASSOCIATION.—Lawrence Wilcox, Room 827, 80 E. Jackson Blvd., Chicago 4.

ALLIED RAILWAY SUPPLY ASSOCIATION.—C. F. Weil, P. O. Box 5522, Chicago 80.

AMERICAN ASSOCIATION OF BAGGAGE TRAFFIC MANAGERS.—T. R. Stanton, 1450 Railway Exchange Bldg. St. Louis 1.

AMERICAN ASSOCIATION OF PASSENGER RATE MEN.—William Bina, 1115 Railway Exchange, Chicago 4. Annual meeting, September 23-25, 1954, Cosmopolitan Hotel, Denver.

AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—B. D. Branch, Eastern Time Table Distributing Company, Liberty Street Terminal, New York 6. Annual meeting, October 10-13, 1954, Huntington Hotel, Pasadena, Cal.

AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.—Miss Elise La Chance, Room 901, 431 S. Dearborn St., Chicago 5.

AMERICAN ASSOCIATION OF TRAVELING PASSENGER AGENTS.—C. A. Melin, P. O. Box 5025, Cleveland 1. Annual meeting, September, 1954, Los Angeles.

AMERICAN COUNCIL OF RAILROAD WOMEN.—Amy Mitchell, Atlanta & West Point, Atlanta 3. Annual meeting, October 4-6, 1954, Hotel Utah, Salt Lake City.

AMERICAN RAILWAY BRIDGE AND BUILDING ASSOCIATION.—Miss Elise La Chance, Room 901, 431 S. Dearborn St., Chicago 5. Annual meeting, September 13-15, 1954, Conrad Hilton Hotel, Chicago.

AMERICAN RAILWAY CAR INSTITUTE.—W. C. Tabbert, 19 E. 47th St., New York 17.

AMERICAN RAILWAY DEVELOPMENT ASSOCIATION.—E. E. Exon, New York Central, 230 E. Ninth St., Cincinnati 2. Annual Meeting, March, 1955, White Sulphur Springs, W. Va.

AMERICAN RAILWAY ENGINEERING ASSOCIATION.—Works in cooperation with the Association of American Railroads, Engineering Division—Neal D. Howard, 59 E. Van Buren St., Chicago 5. Annual meeting, March 15-17, 1955, Palmer House, Chicago.

AMERICAN RAILWAY MAGAZINE EDITORS ASSOCIATION.—G. P. McCallum, Maine Central, 222 St. John St., Portland, Me. Annual meeting, September 29-October 1, 1954, Sheraton-Mt. Royal Hotel, Montreal.

AMERICAN SHORT LINE RAILROAD ASSOCIATION.—C. E. Huntley, 2000 Massachusetts Ave., N. W., Washington 6, D. C. Annual meeting, October 19-20, 1954, Hotel New Yorker, New York.

AMERICAN SOCIETY FOR TESTING MATERIALS.—R. J. Painter, 1916 Race St., Philadelphia 3.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS.—C. E. Davies, 29 W. 39th St., New York 18. Fall meeting September 8-9, 1954, Schroeder Hotel, Milwaukee.

RAILROAD DIVISION.—E. L. Woodward, *Railway Locomotives and Cars*, 79 W. Monroe St., Chicago 3. Fall meeting September 10, 1954, Schroeder Hotel, Milwaukee.

AMERICAN WOOD-PRESERVERS' ASSOCIATION.—W. A. Penrose, 839 Seventeenth St., N. W., Washington 6, D. C.

ASSOCIATED TRAFFIC CLUBS OF AMERICA.—R. P. De Groote, Luckenbach Steamship Co., Inc., 110 S. Dearborn St., Room 1107, Chicago 3. Annual meeting, September 27-29, 1954, Kentucky Hotel, Louisville.

ASSOCIATION OF AMERICAN RAILROAD DINING CAR OFFICERS.—P. E. Griffith, 2028 Clark Ave., St. Louis 3. Annual meeting, October 12-14, 1954, Drake Hotel, Chicago.

ASSOCIATION OF AMERICAN RAILROADS.—George M. Campbell, Transportation Bldg., Washington 6, D. C.

Operations and Maintenance Department.—R. G. May, Vice-president, Transportation Bldg., Washington 6, D. C.

Operating-Transportation Division.—A. I. Ciliske, 59 E. Van Buren St., Chicago 5.

Operating Section.—H. S. Dewhurst, 59 E. Van Buren St., Chicago 5.

Transportation Section.—H. A. Eaton, 59 E. Van Buren St., Chicago 5.

Communications Section.—A. H. Grothmann, 59 E. Van Buren St., Chicago 5.

Fire Protection and Insurance Section.—W. E. Todd, 59 E. Van Buren St., Chicago 5.

Freight Loss and Damage Prevention Section.—G. H. Ruhle, 59 E. Van Buren St., Chicago 5.

Freight Station Section.—W. E. Todd, 59 E. Van Buren St., Chicago 5.

Medical and Surgical Section.—H. S. Dewhurst, 59 E. Van Buren St., Chicago 5.

Protective Section.—H. S. Dewhurst, 59 E. Van Buren St., Chicago 5.

Safety Section.—H. S. Dewhurst, 59 E. Van Buren St., Chicago 5.

Electrical Section of the Engineering and Mechanical Divisions.—S. W. Marras, 59 E. Van Buren St., Chicago 5.

Engineering Division.—E. G. Gehrke, 59 E. Van Buren St., Chicago 5.

Construction and Maintenance Section.—Neal D. Howard, 59 E. Van Buren St., Chicago 5. Annual meeting, March 15-17, 1955, Palmer House, Chicago.

Signal Section.—R. H. C. Balliet, 59 E. Van Buren St., Chicago 5.

Mechanical Division.—Fred Peronto, 59 E. Van Buren St., Chicago 5.

Purchases and Stores Division.—John L. Timanus, Transportation Bldg., Washington 6, D. C.

Freight Claim Division.—R. E. O'Donnell, 59 E. Van Buren St., Chicago 5.

(Continued on page 32)

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TRUCK SAFETY AND ECONOMY

(*Continued from page* 25)

Individual railroads have found certain truck details to be of special importance to them to better adapt trucks to their particular operating problems. Some of the problems that have been encountered are springing to suit roadbed conditions, effects of ice and snow, high braking requirements, extremely curving track, limited right-of-way clearances involving truck lateral motion and roll characteristics, and controlled deflections under load without jeopardizing riding quality.

Cooperative testing between the railroads and truck manufacturer has succeeded in producing satisfactory solutions to these problems.

The weight of a truck should be as light as possible for economic operation without jeopardizing, of course, the other requirements for passenger trucks. Factors which influence and determine truck weight include car-body weight, truck design, type of construction, and material properties.

Car-body weight is the greatest determining factor of truck weight. Passenger trucks must be designed to carry specified center plate loads safely.

Good riding quality, one of the basic requirements for passenger trucks, may require certain features in truck arrangement which increase the weight somewhat over simpler and less desirable riding designs.

For a given truck arrangement, material, and strength it is possible to produce the lightest weight by using one-piece cast-steel parts. Cross sections and member strengths can be varied to suit loading requirements and no additional strengthening plates or gussets are required at member intersections to develop joint strength.

In cases where weight is of particular importance alloy steels can be used in the truck castings to further reduce weight while retaining the required strength. The major steel castings in Commonwealth trucks amount to only 25 to 30 per cent of the total truck weight.

Low Total Cost

In this consideration the total overall truck cost should be considered rather than only the initial cost. Total cost reflects initial cost, maintenance costs over the years, and service life of the truck. In this connection design and construction are important also. American passenger-car trucks must withstand continuous service with minimum maintenance costs over many years in order to be economical.

Experience shows that cheaper methods of construction may produce trucks of arrangement similar to cast-steel designs but ones which require additional maintenance and repair.

It can be seen that there are a number of basic requirements for passenger-car trucks. No one requirement is all important. A proper balance exists between them and all must be present for a successful truck design.

Similarly no one group can produce optimum truck design alone. American passenger-car truck design is the result of the continuing joint cooperative effort of General Steel Castings and the American railroads, carbuilders and suppliers in solving truck requirement problems through the years.

Meetings and Conventions

(Continued from page 30)

General Claims Division.—Bruce H. Smith, 59 E. Van Buren St., Chicago 5.

Car Service Division.—Arthur H. Gass, Chairman, Transportation Bldg., Washington 6, D. C.

Finance, Accounting, Taxation and Valuation Department.—Arthur R. Seder, Vice-President, Transportation Bldg., Washington 6, D. C.

Accounting Division. R. E. Keefer, Transportation Bldg., Washington 6, D. C. Annual meeting, June 27-30, 1955, Ambassador Hotel, Atlantic City.

Treasury Division.—R. E. Keefer, Transportation Bldg., Washington 6, D. C. Annual meeting, September 6-9, 1954, The Greenbrier, White Sulphur Springs, W. Va.

ASSOCIATION OF INTERSTATE COMMERCE COMMISSION PRACTITIONERS.—Miss Sarah F. McDonough, Executive Secretary, 2218 ICC Building, Washington 25, D. C.

ASSOCIATION OF RAILROAD ADVERTISING MANAGERS.—A. W. Eckstein, Illinois Central, 135 E. Eleventh Pl., Chicago 5. Annual meeting, January 20-22, 1955, Chicago.

BRIDGE AND BUILDING SUPPLY ASSOCIATION.—L. R. Gurley, Modern Railroads, 201 N. Wells St., Chicago 6.

CANADIAN RAILWAY CLUB.—G. R. Fitt, P. O. Box 162, Montreal 3, Que. Regular meetings, second Monday of each month, except June, July and August, Sheraton-Mount Royal Hotel, Montreal, Que.

CAR DEPARTMENT ASSOCIATION OF ST. LOUIS.—D. W. Kramer, 7207 W. Main St., Belleville, Ill. Regular meetings fourth Tuesday of each month except June, July and August, Hotel DeSoto.

CAR DEPARTMENT OFFICERS' ASSOCIATION.—F. H. Stremmel, 6536 Oxford Ave., Chicago 31.

CAR FOREMAN'S ASSOCIATION OF CHICAGO.—W. R. McCain, Mather Stock Car Company, 326 N. Michigan Ave., Chicago 1. Regular meetings, second Monday of each month, except June, July and August, LaSalle Hotel.

CENTRAL RAILWAY CLUB OF BUFFALO.—J. B. O'Conner, 1817 Hotel Statler, Buffalo 5. Regular meetings, second Thursday of each month except June, July and August, Hotel Statler.

CHICAGO RAILROADS CAR ACCOUNTING OFFICERS.—W. H. Soderlund (chairman) Chicago & Eastern Illinois, 66th & Union Avenue, Chicago 21. Regular meetings, last Wednesday of each month, except July and August, Congress Hotel, at 12:30.

EASTERN ASSOCIATION OF CAR SERVICE OFFICERS.—H. C. Rochester, Canadian National, 891 Notre Dame St., West, Montreal 3. Next meeting, November 11-12, 1954, Hotel Statler, Detroit.

EASTERN CAR FOREMAN'S ASSOCIATION.—W. P. Dizard, 30 Church St., New York 7. Regular meetings, second Friday of January, February, March, April, May, October and November, 29 W. 39th St., New York.

LOCOMOTIVE MAINTENANCE OFFICERS' ASSOCIATION.—C. M. Lipscomb, 1721 Parker St., North Little Rock, Ark.

MAINTENANCE OF WAY CLUB OF CHICAGO.—E. C. Patterson, 400 W. Madison St., Chicago 6. Regular meetings, fourth Monday of each month, October through April inclusive, except December which is third Monday, at Welty's Restaurant, Field Bldg.

MASTER BOILER MAKERS' ASSOCIATION.—A. F. Stiglmeier, 29 Parkwood St., Albany 8.

METROPOLITAN MAINTENANCE OF WAY CLUB.—John S. Vreeland, Simmons-Boardman Publishing Corp., 30 Church St., New York 7. Meets in February, April, October and December.

MILATARY RAILWAY SERVICE VETERANS.—F. W. Okie, Union R.R., Frick Bldg., P. O. Box 536, Pittsburgh. Annual meeting September 17-19, 1954, Schroeder Hotel, Milwaukee.

MISSISSIPPI VALLEY MAINTENANCE OF WAY CLUB.—P. E. Odom, 1025 Frisco Building, 906 Olive St., St. Louis. Regular meetings, second Monday of each month September through May, DeSoto Hotel, St. Louis.

NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS.—R. Everette Kreeger, 7413 New Post Office Bldg., P. O. Box 684, Washington 4, D. C. Annual meeting, November 8-11, 1954, LaSalle Hotel, Chicago.

NATIONAL ASSOCIATION OF SHIPPERS' ADVISORY BOARDS.—T. C. Burwell, A. E. Staley Mfg. Co., 22nd St., Decatur, Ill. Annual meeting, October 12-14, 1954, Brown Hotel, Louisville.

NATIONAL DEFENSE TRANSPORTATION ASSOCIATION.—Mrs. Lois C. Gebran, Suite 728, 1001 Connecticut Ave., Washington 6, D. C. Annual meeting, October 24-27, 1954, William Penn Hotel, Pittsburgh.

NATIONAL INDUSTRIAL TRAFFIC LEAGUE.—L. J. Dorr, Suite 909, Sheraton Bldg., 711 14th St., Washington 5, D. C. Annual meeting, November 18-19, 1954 Hotel Statler, New York.

NATIONAL RAILWAY APPLIANCES ASSOCIATION.—J. B. Templeton, Templeton, Kenly & Co., 2545 Gardner Rd., Broadview, Ill. Lewis Thomas, Asst. Secy., 59 E. Van Buren St., Chicago 5.

NATIONAL SAFETY COUNCIL, RAILROAD SECTION.—C. T. DeWitt, Northern Pacific, St. Paul 1, Minn. Annual meeting, October 19-21, 1954, Morrison Hotel, Chicago.

NEW ENGLAND RAILROAD CLUB.—William M. McCombs, 35 Lewis Wharf, Boston 10. Regular meetings, second Tuesday of each month, except May-September, incl. Hotel Vendome, Boston.

NEW YORK RAILROAD CLUB.—C. T. Stansfield, 30 Church St., New York 7. Regular meetings, third Thursday of each month except June, July, August, September and December. Centruy Room, Commodore Hotel. Reception, 6 p.m.; dinner 7; meeting, 8:15.

NORTHWEST CARMEN'S ASSOCIATION.—N. J. Maglich, Minnesota Transfer Ry., 2071 University Ave., St. Paul 4, Minn. Regular meetings, first Monday of each month, except June, July, and August, Midway Club, 1931 University Ave., St. Paul.

NORTHWEST LOCOMOTIVE ASSOCIATION.—R. M. Wigfield, Northern Pacific, Room 1134, G. O. Bldg., St. Paul 1, Minn. Regular meetings, third Monday of each month, except June, July and August, Midway Club, 1931 University Ave., St. Paul.

PACIFIC RAILWAY CLUB.—S. E. Byler, 121 E. Sixth St., Los Angeles 14. Regular meetings, second Thursday of each alternate month at Sir Francis Drake Hotel, San Francisco, and Elks' Temple, Los Angeles.

RAILROAD PUBLIC RELATIONS ASSOCIATION.—J. Don Parel, Association of American Railroads, Transportation Bldg., Washington 6, D. C.

RAILWAY BUSINESS ASSOCIATION.—P. H. Middleton, 38 S. Dearborn St., Chicago 3. Annual meeting and dinner, November 18, 1954, Waldorf-Astoria, New York.

RAILWAY CLUB OF PITTSBURGH.—G. E. Morrison, 2710 Koppers Bldg., Pittsburgh 19. Regular meetings third Thursday of each month, except June-September, incl., and December. Fort Pitt Hotel.

RAILWAY ELECTRIC SUPPLY MANUFACTURERS' ASSOCIATION.—L. R. Oswald, Thos. A. Edison, Inc., 1500 S. Western Ave., Chicago 8.

RAILWAY FUEL AND TRAVELING ENGINEERS' ASSOCIATION.—L. H. Peters, New York Central, Room 1213, 139 W. Van Buren St., Chicago 5.

RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION.—A. W. Brown, 60 E. 42nd St., New York 17.

RAILWAY SYSTEMS AND PROCEDURES ASSOCIATION.—J. W. Milliken, *Railway Age*, 30 Church St., New York 7. Next meeting, November 16-18, 1954, Hotel Morrison, Chicago.

RAILWAY TELEGRAPH AND TELEPHONE APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York 7. Meets with Communications Section of AAR.

RAILWAY TIE ASSOCIATION.—Roy M. Edmonds, 1221 Locust St., St. Louis 3. Annual meeting, October 20-22, 1954, Mayflower Hotel, Washington, D. C.

ROADMASTERS AND MAINTENANCE OF WAY ASSOCIATION.—Miss Elise La Chance, Room 901, 431 S. Dearborn St., Chicago 5. Annual meeting, September 13-15, 1954, Conrad Hilton Hotel, Chicago.

ST. LOUIS RAILROAD DIESEL CLUB.—F. C. Whitlock, Terminal Railroad Association of St. Louis, 376 Union Station, St. Louis 3. Regular meetings second Tuesday of each month, Hotel York. Dinner, 6:45 p.m., meeting, 8.

SIGNAL APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York 7. Meets with AAR Signal Section.

SOUTHEASTERN RAILWAY DIESEL CLUB.—H. W. Brewer, Seaboard Air Line, P. O. Box 6204, Jacksonville, Fla. Regular meetings, second Tuesday in February, April, June, August, October and December, 9:30 a.m., Mayflower Hotel, Jacksonville.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.—A. T. Miller, 4 Hunter St., S. E. Atlanta. Regular meetings, third Thursday in January, March, May, July, September and November, Ansley Hotel, Atlanta.

SOUTHERN ASSOCIATION OF CAR SERVICE OFFICERS.—F. I. Umhau, Southern Ry., Atlanta 3.

TORONTO RAILWAY CLUB.—H. Sommerville, P. O. Box 8, Terminal "A," Toronto 2, Ont. Regular meetings, fourth Monday of each month, except February, June, July, August and December, Royal York Hotel.

TRACK SUPPLY ASSOCIATION.—Lewis Thomas, Q and C Company, 59 E. Van Buren St., Chicago 5.

WESTERN ASSOCIATION OF RAILWAY TAX COMMISSIONERS.—L. R. Norberg, 516 W. Jackson Blvd., Chicago 6. Regular meetings, 12:15 p.m., first Wednesday of each month, except July and August, Traffic Club, Palmer House, Chicago.

WESTERN RAILWAY CLUB.—E. E. Thulin, Suite 339, Hotel Sherman, Chicago 1. Regular meetings: October 11, November 8, December 18, 1954; February 21, March 21, April 25, May 16, 1955.

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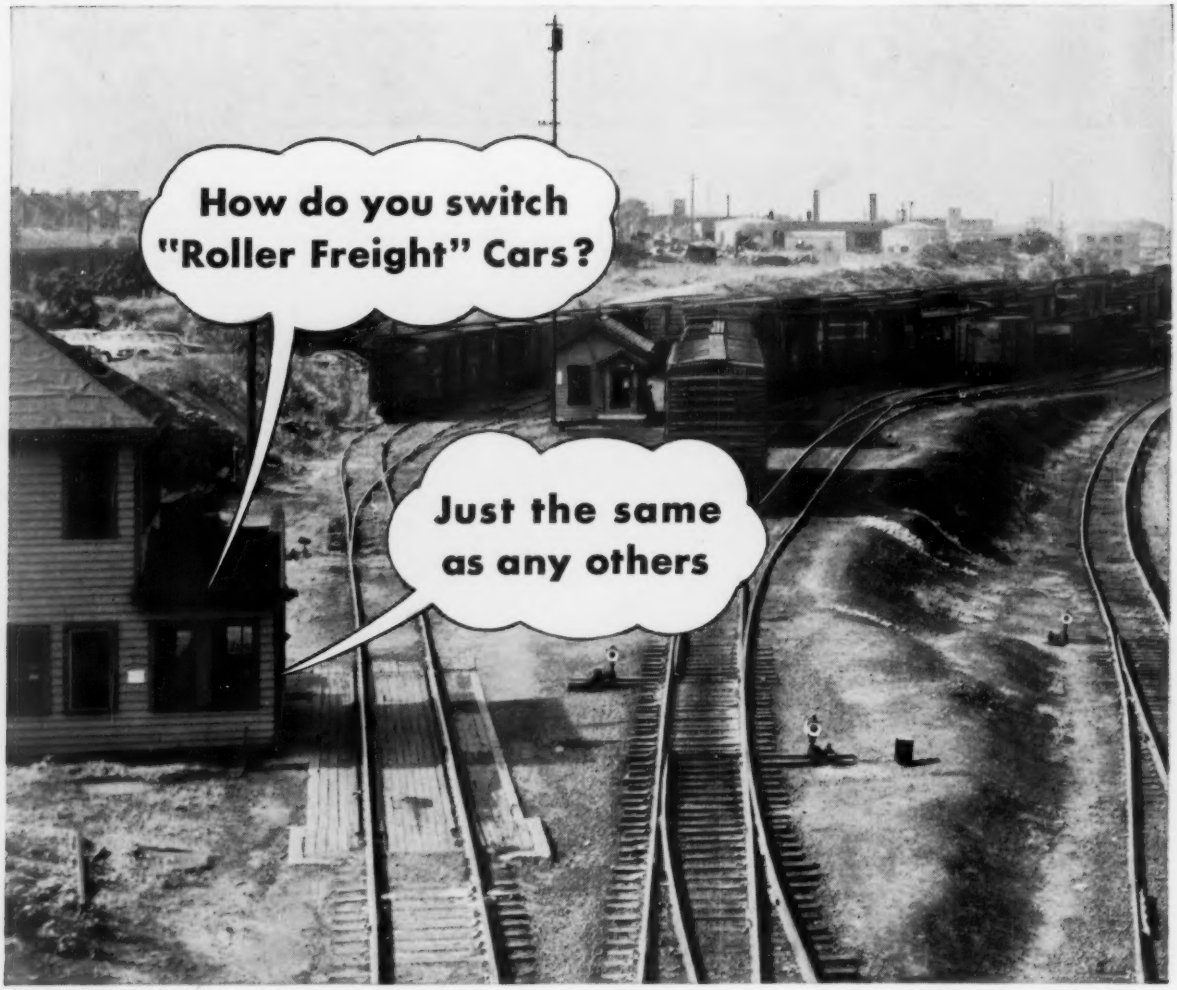

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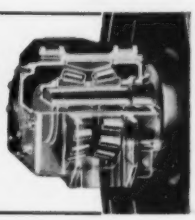

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